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ABSTRACT

This primary education curriculum guide was developed jointly by the Iowa and Nebraska Departments of Education to provide educators with a coherent framework to guide local planning for reform of educational programs for children at the kindergarten and primary level. In the belief that the field has moved beyond separate areas of service or curriculum, this second edition of the guide presents content related both to differences among learners and to emergent areas of curriculum throughout the text, reflecting the way children learn best--in an integrated and inclusive fashion. Following a preface, the first part of the guide outlines the paradigm shift underlying the guide and highlights principles of implementation and factors for consideration. The second part outlines the guiding principles and goals of the primary program in relation to children's artistic and aesthetic, social and emotional, intellectual, and physical development, as well as development of responsibility. This part also presents position statements in areas including standards, ethics, learning through play, school readiness, tracking and retention, assessment, class size, and grouping. The third part explores the learning environment and teacher as decision maker, and covers partnerships with families and communities, cultural diversity, transitions, active learning, and technology. The fourth part examines curriculum and assessment, including widely held expectations, and goals for development and learning. The guide concludes with a list of contributors, state education agencies, and reviewers. (HTH)

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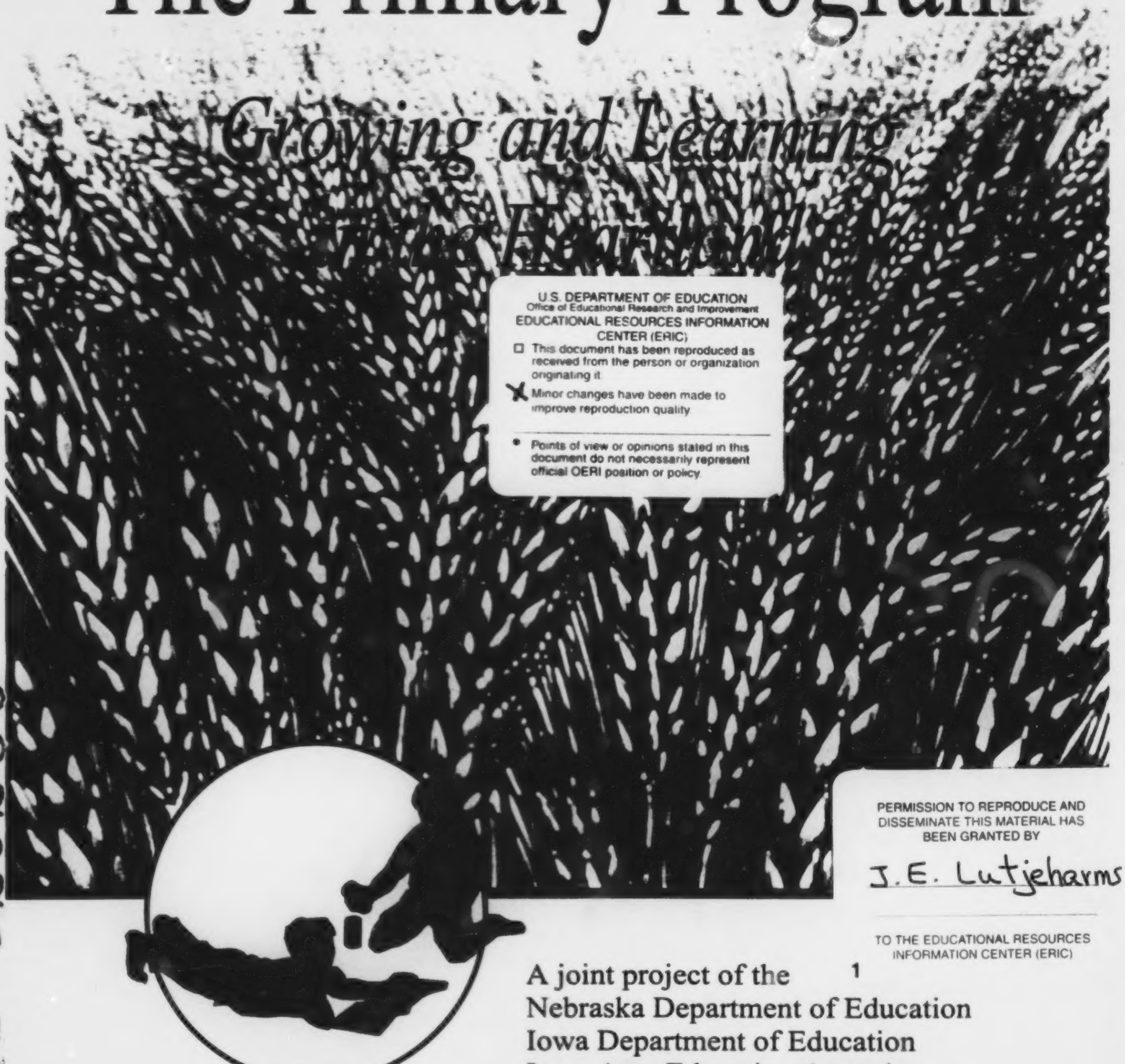
Second Edition

The Primary Program



Growing and Learning in the Heartland

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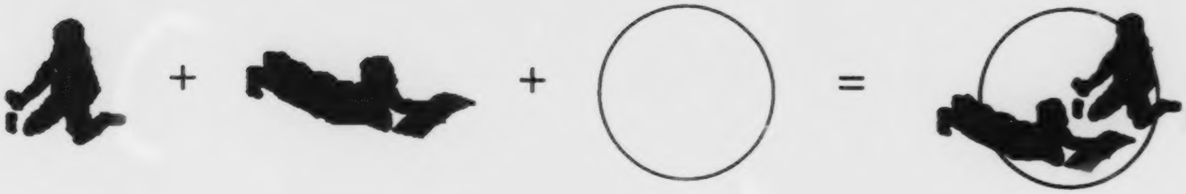

The Primary Program
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Credits: Insert beige tab after page 586 and before page 587.

State Information: Insert beige tab after the end page 600. This section is for information that you may want to add which is specific to the state in which you live.

We hope this document will provide support to you
in the work you do with young children, their families,
and your colleagues.

The Primary Program:
Growing and Learning in the Heartland
is dedicated to

Dr. Lilian G. Katz

You can either be the candle that lights the room
or the mirror that reflects it. Edith Wharton

Lilian Katz is both for the early childhood profession. For years she has provided light and guidance for young practitioners. She has asked provocative questions to mature ones.

Lilian is famous for the stories that she has given back to us as points of clarification and as examples of our practice.

She has lighted the path for so many of us. We are fortunate to have been in her company and learned through her guidance.

We expect to continue to do so for many years to come.

The Primary Program

Growing and Learning in the Heartland

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Acknowledgments

The Primary Program: Growing and Learning in the Heartland, exemplifies the spirit of early childhood professionals, many contributing their energy, ideas and understanding toward a common goal.

The original *Primary Program*, published in 1990, was the work of educators in British Columbia. With the generosity and permission of the Ministry of British Columbia and our now long time Canadian friends, Marlene Dergousoff and Coleen Politano, the Iowa and Nebraska Departments of Education undertook a revision of the document for use by audiences in the United States. In the spring of 1993, a team of Iowa and Nebraska early childhood professionals produced *The Primary Program: Growing and Learning in the Heartland*. Since that time, over 8,000 copies have been distributed throughout the United States and internationally.

A video series, *The Early Childhood Program: A Place to Learn and Grow*, co-produced by the Stark County (Ohio) School District, the Ohio, Nebraska, and Iowa Departments of Education, the Jennings Foundation, the National Association for the Education of Young Children and the North Central Regional Educational Laboratory soon followed. The series is distributed through NAEYC and continues as one of its most popular products.

As all early childhood educators know, learning is never done. The Second Edition of *The Primary Program* reflects new research and learning in the field since 1993. With our belief in life-long learning, we know there will be a continuously growing body of research from which to draw additional information. In the 2001 edition, we have attempted to provide a framework of the current knowledge base and encourage each user to continue learning as new information becomes available. *The Primary Program* is a resource for adult learners/educators as they plan and organize local curriculum.

Our thanks go to the Director and Commissioner and Boards of Education in the Iowa and Nebraska Departments of Education, and the Early Childhood Specialists and Consultants in the Area Education Agencies in Iowa and the Educational Service Units in Nebraska. The Primary Editorial Team worked to clarify and update each section of the document. Teachers in Nebraska and Iowa provided photographs of their students and families and over 200 reviewers in Iowa, Nebraska, North Carolina, Ohio and Colorado provided assistance. Their names are listed in the Credits chapter.

Our guest author, Dr. Lilian Katz and contributors, Dr. Brian Cambourne, Marilyn Kelly and Dr. Linda Munger added to the quality of the team's work.

Very special praise goes to the editor, Kimberly Thuente at Heartland Area Education Agency and the desktop production work of Caryl Jotzke with the support of Heartland Area Education Agency. This document would not have been completed without their dedication.

We thank you all for taking the time to do this fine work. Our good fortune is to have professional colleagues with whom to work and personal friends to make our work even more enjoyable.

With Gratitude,
Harriet Egertson and Susan Andersen
Nebraska and Iowa Departments of Education

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Summer, 2000

Dear Educators:

Never in any period in our history as a state and nation, has so much time, energy and attention been paid to our local schools. Most of the time, energy and attention have been on standards, assessments and accountability. They are very important to the quality of our schools and to the future of the students who are in them.

In the urgency to put these reforms into place, we may have lost sight of some of the reasons that we started the reform and renewal process in the first place. Everything about standards, assessments and accountability is focused on students and their learning. If we are unable to bring the classroom to the center of the educational process, with the student as an active participant in the learning process, we have failed the promise that standards, assessment and accountability may hold. We must develop learning environments that meet the needs of all of our students in inclusive settings. We must link standards, assessments, and accountability and use them as tools to guide curriculum development, instructional design and teaching practice—all focused on the learner.

We understand more than ever about the growth and development of the students in our schools, about the importance of the early years in education, and about the unique learning needs of children in the early childhood period of development (birth through age 8). Much has been done to engage local schools and communities in partnerships to develop primary school programs that serve the unique needs of our children. *The Primary Program* interprets Nebraska's High Performance Learning model and includes instructional guidelines focused on the early elementary years. Our Department has had a long history of promoting developmentally appropriate curriculum and assessment in the kindergarten/primary level of schooling.

We continue to be grateful for the partnership with the Iowa Department of Education and our colleagues in British Columbia for sharing their exemplary work with us. The collaboration between Nebraska and Iowa and British Columbia has resulted in this exemplary work known as *The Primary Program*. This is a document of high quality and a sound research base that is an invaluable tool to school districts and educators.

All of us need to be engaged in efforts to improve learning outcomes for our future citizens. We cannot ignore the importance of the unique needs of the children in our early grades. All of the children in our schools are future citizens and we need future citizens to get the best school beginning that we can possibly provide. Our staff is ready to assist you in any way possible in providing for the youngest of our future citizens.

Sincerely,

Douglas D. Christensen, Ph.D.
Commissioner of Education

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November 2000

Dear Colleague:

A child's early years are critically important to future success in learning, as research makes increasingly clear. A love of learning nurtured in those first years can last a lifetime.

The Iowa State Board of Education and Iowa Department of Education have been consistently committed to early childhood education that ensures children's readiness to learn. In 1999, the State Board identified investing in early childhood education as priority number one. The Board believes that investment must include:

- Preschool programs to ensure readiness
- Parent education programs to provide parents the necessary skills to respond to their child's needs
- Planning to tailor available resources toward locally established early childhood goals

As we pursue high quality programs to help children realize their potential, The Primary Program is an excellent resource as a model for local schools to utilize.

The Iowa Department of Education, partnering with the Nebraska Department of Education, other education service agencies, and the Early Childhood Network offer this Program's clear vision of early childhood education. I would like to take this opportunity to congratulate all participants for their important efforts on behalf of our young children.

Sincerely,

Ted Stilwill
Director

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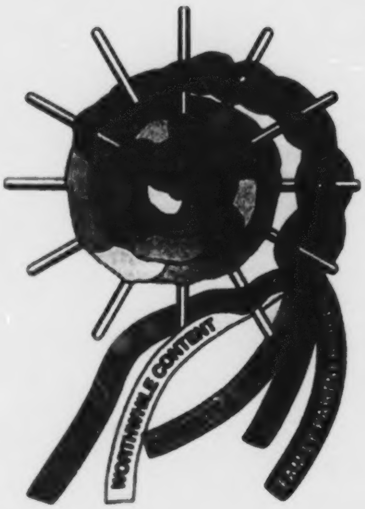
Introduction to
The Primary Program: Growing and Learning in the Heartland

In times past, educating children was generally seen as relatively straightforward—a matter of bringing together teachers and children with books and ideas. Over time, educators and the public have come to know that learning for human beings is a complex enterprise affected by a host of conditions related to the learner, the community, and the learning environment.

Before an educational need or approach is known, it is ignored. When it is discovered, it is often considered separately. When it is more fully understood, it can be integrated in the whole of the life of the classroom. An example has been the education of children with disabilities. Before the 1970s, children with disabilities were often excluded from public schools; even when they finally secured access to public education, it was often a separate classroom. Today it is more common to find most children receiving the special services they may need in the context of an age-based grouping and more frequently within the physical space of the classroom.

In the first edition of *The Primary Program: Growing and Learning in the Heartland,* separate chapters were developed or maintained for several areas of service or curriculum. The authors of this edition believe that the field has moved beyond that approach—that it is time to approach the organization of teaching and learning for all children in the way that it is now understood that they learn best—in an integrated and inclusive fashion. For that reason, content related both to differences among learners and to emergent areas of curriculum is presented within the entire text of the second edition of *The Primary Program.* This integration, or weaving together of ideas and strategies, is represented by the graphic shown here—a complex weaving—strands woven together and woven again into a whole.



This model is intended as mental model for users of the document. A mental model that is helpful as a visual reminder of a complex set of ideas.

The Primary Program: Growing and Learning in the Heartland is a research based curriculum framework that will assist practitioners in becoming more consciously competent in their work with young children. *The Primary Program: Growing and Learning in the Heartland* can help practitioners to:

Develop Self-knowledge

- To confirm and communicate why you use certain practices in your daily work with children
- To expand the knowledge base
- To identify resources for early education
- To continuously improve daily teaching practices

Achieve Perspective

- To identify challenging but achievable student learning goals across the curriculum and across grade levels
- To develop a common vision, mission, or learning goals for school boards, districts, center staff, or grade level groups
- To appreciate learning goals that cross content areas and mutually reinforce learning
- To provide a common knowledge base and language for school improvement efforts

Better Define Early Childhood Education

- To focus of the uniqueness of the child from birth through age eight years
- To recognize the widely-held expectations of development for this age group
- To maximize the interrelationships of learning for young children
- To convey the value of student ownership in learning and motivation

Interpret and Apply Research

- To understand the relevance of research to the teaching and learning process
- To apply research findings in meaningful and relevant ways
- To use the principles of child development
- To clarify the relationship between curriculum, assessment, and instruction
- To study and learn with colleagues

Empathize

- To understand and celebrate the energy and wonder of young children
- To understand the process of inquiry
- To create safe and respectful learning environments
- To respect the culture, language, and development of each child

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The Primary Program: Growing and Learning in the Heartland will:

- Provide discussion topics for staff meetings
- Guide self-assessment
- Identify resources and references
- Make connections across content areas
- Affirm that all children learn with support and challenges
- Identify the value of standards
- Clarify the purpose of assessment
- Guide assessment and evaluation decisions
- Provide a roadmap for individual, program, and school journeys
- Suggest goals that reflect developmentally appropriate practices
- Provide Widely-Held Expectations for children from birth through age 13 years
- Reflect child development principles
- Support comprehensive school improvement

Building Commitment to Change

The Paradigm Shift

At the heart of the Primary Program is a shift in thinking about teaching and learning. Primary teachers have always known many things about young children just by being with them day after day. After a few hours in the classroom, it becomes apparent children are physically and mentally active; they interact with people and things around them, and they constantly use language.

Some of these behaviors were once thought to be problematic in a school setting because the paradigm of schooling called for classrooms to be quiet and adult-like. But, a deeper understanding of how young children grow and learn dispels the need to spend time and energy forcing children to be something they are not.

Expanding information in the past few years supports the belief that children are different from adults both physically and intellectually. A new paradigm is needed if children are to learn in the ways they learn best. The image of school becomes one of a place that is active and interactive, a place where adults and children can thrive.

School needs to be a place where problems are posed and solutions are generated; where mistakes are made and valued as learning experiences; where cooperation is nurtured in the face of conflict; where teachers, parents, and children make decisions **together** about what is best for the children.

In this new vision of teaching and learning, the people involved confront their beliefs in light of this information. They become keen observers of children and develop a sense of what children can do independently, when they need support, and what can be expected as a next step in children's development.

Implications for the Primary Program

A commitment to a new paradigm takes time and energy, but is well worth the joy and renewal it brings to those who work with young children. As this document is read, return often to the chart on the next page to reflect on beliefs. Use it as a guide and a gauge for the development of thinking and practices. Include it as a reference at meetings and training sessions. Use it to compare the characteristics of traditional practice to those of the vision toward which the school community is working.

The Primary Program: A Paradigm Shift, A Continuum of Change

Shift from: →	**Toward:**
Child adapts	Schools adapt
Child as passive	Child as active
Child as dependent	Child as a partner in learning
Whole group instruction	Whole group, small group, and individual instruction
Individual tasks	Balanced small groups, cooperative and individual tasks
Preset material is covered	Children's capacity to learn is extended
3 R's as the total instructional focus	Focus is on concepts, skills, processes, and attitudes in five goal areas (Aesthetic and Artistic Development, Emotional and Social Development, Intellectual Development, Physical Development and Well Being, Development of Responsibility)
Separate Subjects	Integrated subjects
Workbooks	Concrete materials, quality literature, and a variety of resource materials
Verbal informational emphasis	Constructivist, problem-solving, thinking emphasis
Single correct answer	Alternative solutions are generated
Work and play divided	Play is one condition of learning
Holiday rituals marked	Multicultural content is based on the study of social experience
Teacher as the sole arbitrator of what is correct	Children as theory builders and negotiators
Grouping is by ability or age	Group is developed by interest, motivation, and learning needs
Assessment is of what a child already knows	Assessment focuses on how a child learns and what a child "can do"
Assessment is for classification and reporting	Assessment is ongoing for purposes of instructional decision-making
Child is recipient of the teacher's teaching	Child is collaborator in own learning
Answers are valued	Questions are valued
Paper and pencil representations	Multiple ways of representing knowledge

Adapted from Dr. Patricia K. Arlin's opening address, "New Beginnings," May, 1989, U.B.C., based on Doris Pronin Fromberg, "Kindergarten: Current Circumstances Affecting Curriculum" Teachers' College Record, 90, pp. 392–43.

Managing Change

There are critical factors which influence whether planned change succeeds or fails. There are also some concepts relative to change that must be kept in mind. People will support change if there is agreement that change is needed and if specific goals are shared by all.

Change, by nature, cannot be understood by only reading about it. The references and resources in this section are a starting point for managing the process, the rest is up to those involved. As the journey begins remember to…

Celebrate Learning for Children and Adults

- Learning is a lifelong activity.

  The process of change in curriculum implies many learning opportunities for those involved. A purpose for learning must be created through common goals.

Nurture the Professionals

- Provide a wide range of learning experiences.

  An array of options ensures that individuals can choose according to learning strengths and preferences. Study groups, workshops, classroom observations, opportunities to try out new ideas, or a combination of these can be tailored to individual needs.
- Create opportunities for self-selected activities.

  The change process can be more comfortable if those involved can begin with a familiar interest and pursue changes as approximations toward goals. Motivation to learn is higher when personal interest is present.
- Allow time to explore, try out, create, and construct.

  Meaningful change requires patience. An artist is rarely hurried in his or her work. Planning on paper is part of the process, but there comes a time for action. Leaders can reduce the stress of change by encouraging risk-taking without high stakes.
- Accept and recognize problems as learning opportunities. When people are immersed in real problems, they are challenged to create solutions. Problems are often the indicators of what we need to do differently or what the next step should be. Mistakes are a natural part of the process of learning; successful change embraces them as such.
- View collaboration as essential. Adults learn from one another. Encourage the use of language to share successes and difficulties. Opportunity and time must be provided for teachers to talk about the frustrations and satisfactions they are experiencing. Teachers are typically isolated in the classroom. They need to practice the skills of collaboration as they plan, discuss, design activities, and teach each other about new strategies.

Principles of Implementation

Implementation is the process of putting a new program into practice. It involves careful planning, open discussion, and adaptation of original plans. A positive approach which emphasizes existing strengths can help those involved in the implementation process to avoid many problems.

The process of implementation recognizes the classroom as the focus of all educational activity. School administrators within a district must share in the responsibility for coordinating and supporting ongoing staff development opportunities to meet the individual needs of teachers.

The key agent in implementation is the teacher. Successful program implementation occurs only when teachers commit themselves to the philosophy of the new curriculum, learn what changes are involved, discuss them with colleagues, and adapt them to suit local conditions and the needs of their students. The chart on the next page outlines the responsibilities of all involved in implementing change.

Factors for Consideration

Consider these factors in planning and implementing change:

- The ultimate goal of all new programs is to enhance the quality of classroom life and to help children learn more effectively. This goal needs to be clear to all who are involved in the process of implementing a new program.
- Every new program begins with planning, and planning is involved at every stage of the implementation process.
- Successful implementation of a new program requires time and resources. The school board and administration must commit time and money to change.
- It is the responsibility of the district leadership to articulate the vision for change and to plan for staff development opportunities. Administrators have an active role in the process.
- Those involved in implementation must be willing to change and adjust to the new direction.
- Change is a process of professional development and growth. It is both a personal and social experience.

Roles of Participants in the Change Process

Teachers	▪ Implement change by translating curriculum documents into relevant learning experiences in their classrooms.
School Administrators	▪ Assume leadership for ensuring that curriculum implementation takes place within the schools and support and guide these activities.
School District Personnel	▪ Ensure that curriculum implementation takes place within their schools; plan, facilitate, and evaluate the implementation process; and support both classroom teachers and administrators.
Curriculum Specialists	▪ Provide implementation initiatives for the district's plan; carry out district implementation plans; implement individual projects; assist schools with the implementation of their priorities; and evaluate implementation procedures.
School Boards	▪ Respond to the need for resources and materials. ▪ Support development of the curriculum and its implementation ▪ Are informed regarding implementation of policy directions; review implementation progress reports from the administration and members of stake-holder groups.
Parents and the Community at Large	▪ Are consulted and provide input throughout the change process.

References and Resources

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Professional Development

The intent of *The Primary Program* is to shift thinking about teaching and learning. Therefore, it is important to look at the role of professional development in the teaching and learning process.

Guskey (2000) defines professional development as intentional, ongoing, and systemic processes that enhance the knowledge, skills, and attitudes of educators in order to affect student learning. Sparks and Hirsh (1997) state three transforming ideas to shift the thinking of professional development as it was previously known: (a) results-driven staff development (i.e., continuous improved performance of students, teachers, and school), (b) system thinking (i.e., complex, interdependent relationships among changes within the system), (c) constructivism (i.e., creating own meaning through collaboration with peers and reflective practices).

National Staff Development Council (1995) has developed staff development standards to guide the shift in thinking about how quality professional development is planned, implemented, and evaluated. These context, process, and content standards have been developed as a means to ensure that professional development makes a difference in the teaching and learning process.

Context standards include effective staff development that:
- Requires and fosters a norm of continuous improvement.
- Requires strong leadership in order to obtain continuing support and to motivate all staff, school board members, parents and the community to be advocates for continuous improvement.
- Is aligned with the school's and the district's strategic plan and is funded by a line item in the budget.
- Provides adequate time during the workday for staff members to learn and work together to accomplish the school's mission and goals.
- Is an innovation in itself that requires study of the change process.

Process standards include effective staff development that:
- Provides knowledge, skills, and attitudes regarding organization development and systems thinking.
- Is based on knowledge about human learning and development.
- Provides for the three phases of the change process: initiation, implementation, and institutionalization.
- Bases priorities on a careful analysis of disaggregated student data regarding goals for student learning.
- Uses content that has proven value in increasing student learning and development
- Provides a framework for integrating innovations and relating those innovations to the mission of the organization.
- Requires an evaluation process that is ongoing, includes multiple sources of information, and focus on all levels of the organization.
- Uses a variety of staff development approaches to accomplish the goals of improving instruction and student success.

- Provides the follow up necessary to ensure improvement.
- Requires staff members to learn and apply collaborative skills to conduct meetings, make shared decisions, solve problems and work collegially.
- Requires knowledge and use of the stages of group development to build effective, productive, collegial teams.

Content standards include effective staff development that:

- Increases administrators' and teachers' understanding of how to provide school environments and instruction that are responsive to the developmental needs of students.
- Facilitates the development and implementation of school and classroom-based management which maximize student learning.
- Addresses diversity by providing awareness and training related to the knowledge, skills, and behaviors needed to ensure that an equitable and quality education is provided for all students.
- Enables educators to provide challenging, developmentally appropriate curricula that engage students in integrative ways of thinking and learning.
- Prepares teachers to use research-based teaching strategies appropriate to their instructional objectives and their students.
- Prepares educators to demonstrate high expectations for student learning.
- Facilitates staff collaboration with and support of families for improving student performance.
- Prepares teachers to use various types of performance assessment in their classrooms (National Staff Development Council, 1995).

Lieberman (1995) states that teachers should be actively engaged in a variety of learning opportunities to construct their own meaning, collaborate with others, problem solve, and practice in their own classrooms. Various approaches to professional development can be used as models or designs for continuous professional growth in the teaching and learning process: (a) training, (b) observation and assessment, (c) involvement in the development and improvement process, (d) study groups, (e) action research, (f) mentoring, and (g) self-directed learning (Guskey, 2000; Sparks & Hirsh, 1997; Sparks & Loucks-Horsley, 1989).

The effectiveness of the professional development approaches can be evaluated either through planning, formative, and/or summative evaluations. Guskey (2000) identifies five different levels of professional development evaluation: (a) participants' reactions, (b) participants' learning, (c) organization support and change, (d) participants' use of new knowledge and skills, and (e) student learning outcomes.

The intent is to create learning communities, where students, teachers, administrators, support staff, and parents, become both learners and teachers.

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Guiding Principles and Goals of the Primary Program

Philosophy

The Primary Program nurtures the continuing growth of children's knowledge and their understanding of selves and the world. It provides a safe, nurturing, and stimulating environment where learning flourishes. The program recognizes that children are individuals, and every child is unique. The program facilitates continuous learning by accommodating the broad range of children's needs, their learning rates and styles, and their knowledge, experiences, and interests. It presents an integrated curriculum, incorporating a variety of instructional models, strategies, and resources.

The program respects the development of the whole child. It reflects an understanding that children learn through active involvement and play and that children demonstrate and represent their knowledge in a variety of ways. It recognizes the social nature of learning and the essential role of language in mediating thought, communication, and learning.

The program views assessment and evaluation as integral components of the teaching-learning process. Assessment and evaluation support each child's learning and assist the teacher in making appropriate educational decisions.

The program values teachers and parents as partners in children's learning. Teachers and parents consult and collaborate to create a climate of respect, success, and joy necessary for lifelong learning.

Common Understandings

- **Experience, knowledge, curiosity, and sense of wonder are foundations for children's learning.**
  The experiences and knowledge young children bring to school, combined with their natural curiosity and sense of wonder, is the foundation for learning in the primary years. The Primary Program is designed to help develop the potential of each child. It respects and values differences in children, building upon individual differences rather than stressing conformity. It provides opportunities for continuous learning without the restrictions created by fixed ability grouping of children or by retention and promotion practices. It allows for the fact that for each child learning occurs in different areas, at different times, and in different ways.

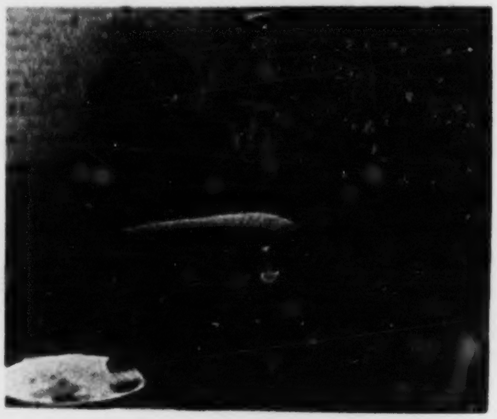
- **Children learn through active involvement and play.** The program honors the development of the whole child. It reflects an understanding that children learn through active involvement and play and that children demonstrate their knowledge in a variety of ways.

- **The ideal learning environment provides time and opportunity for children to learn cooperatively and collaboratively.** The primary learning environment provides time and opportunity for children to experience and respond creatively to their world. The learning environment is social in nature, providing a secure and stimulating climate for all children. It provides time and opportunity for children to take appropriate risks and to explore and investigate their world. Children have experiences which encourage them to interact with others, to develop interpersonal skills, and to work and learn cooperatively and collaboratively.

If children are excited, curious, resourceful, and confident about their ability to figure things out and eager to exchange opinions, with other adults and children, they are bound to go on learning, particularly when they are out of the classroom and throughout the rest of their lives.
Kamii, 1990

- **Assessment and evaluation are the basis for educational decisions, which support each child's learning.** Evidence of what each child can do is collected frequently and used to make decisions about instruction and activities to meet learning needs. Assessment and evaluation are viewed as integral components of the teaching-learning process which support each child's learning; they assist the teacher in making appropriate educational decisions. The assessment and evaluation of each child's growth in learning is based on the goals of the primary program, not by comparison with other children. In this way, children are encouraged to improve their performance and realize their individual potential rather than to compete with others.

- **The young child learns to make sense of a complex world.** Every child enters the world ready to learn, wanting to learn, and, in fact, needing to learn. The need for food and shelter is matched by a vital need to make sense of their surroundings. Imagine a world of the very young child, a complex world of sights, sounds, smells, tastes, and textures for which the child must find meaning. In a real sense, knowledge about this world is constructed by the child and with very little direct help from others.



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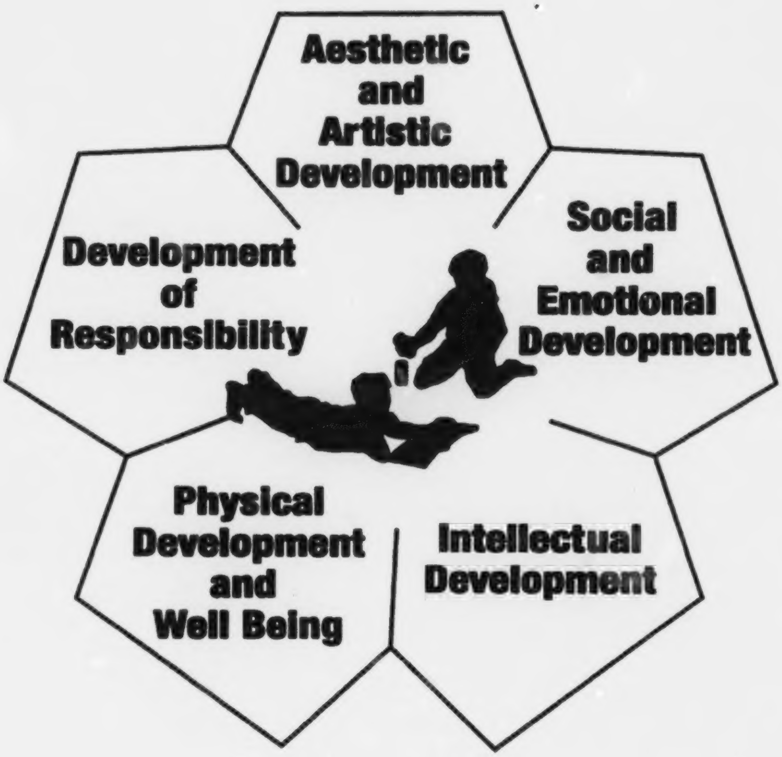
- **Teachers and parents are valued partners in each child's education.**
  The program values teachers and parents as partners in the child's education; they consult and collaborate to create a climate of respect, success, and joy. Parents are the most influential people in their children's lives. Children learn the language of the home and how language is used. They learn the attitudes and values that their parents have about learning. No wonder some educators have said that children accomplish the most complex learning of their lives before they ever come to school. And, they have done it largely by themselves on their own initiative. Clearly, learning is natural, and wanting to know and learn are basic human characteristics.

Goals of the Primary Program

The goals of the primary program are interrelated and of equal importance. They provide the foundation upon which the program is built. Foundation statements support each goal, the building blocks which educators use to plan experiences and acknowledge and honor the basic human need to learn.


Aesthetic and Artistic Development
Social and Emotional Development
Development of Responsibility
Physical Development and Well Being
Intellectual Development

Primary Program Goals

Aesthetic and Artistic Development

A variety of experiences will be provided to enable the child to:

- Develop enthusiasm for the arts
- Imagine and visualize through the arts
- Respond through the arts
- Express and represent through the arts
- Interpret through the arts
- Create through the arts
- Appreciate the arts
- Think, learn, and communicate through the arts

Social and Emotional Development

A variety of experiences will be provided to enable the child to:

- Develop a positive, realistic self-concept
- Develop independence
- Set appropriate goals
- Feel satisfaction with accomplishments and efforts
- Cope with change
- Share and cooperate
- Develop friendships
- Learn from others
- Enjoy living and learning

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Intellectual Development

A variety of experiences will be provided to enable the child to:

- Sustain and extend natural curiosity
- Develop thinking through meaningful learning experiences
- Use language to facilitate thinking and learning
- Use language to communicate effectively
- Develop and integrate the attitudes, dispositions, skills, and knowledge of the fine arts, the humanities, the practical arts, and the sciences
- Become an independent, lifelong learner

Physical Development and Well Being

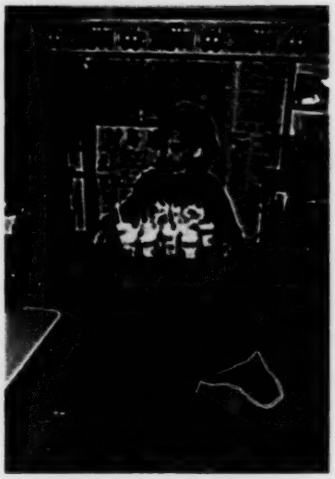
A variety of experiences will be provided to enable the child to:

- Learn and practice safety procedures
- Take care of and respect one's body
- Develop an awareness of good nutrition
- Develop a wide variety of motor skills while maintaining physical fitness
- Develop an appreciation and enjoyment of human movement
- Learn social skills in a physically active setting

Development of Responsibility

A variety of experiences will be provided to enable the child to:

- Value and respect individual contributions
- Value, respect, and appreciate cultural identity and heritage
- Accept and demonstrate empathy
- Acquire cooperative and independent social skills
- Respect and care for the environment
- Adapt to a changing world
- Value and respect individual differences in people



Aesthetic and Artistic Development

A light-hearted, natural process of becoming acquainted with artists begins when young children become aware that the pictures in their favorite books, the sculpture in the park, and the woven hanging in the living room were made by artists. Thompson, 1995

Experiencing the arts is an integral, natural, and essential part of each child's development. The arts provide, in addition to pleasure and satisfaction, a way for children to respond to and interpret their real and imagined worlds; a vehicle through which children may express curiosity, feeling, and understanding; and a context in which children may discover and appreciate aspects of their cultural heritage and that of others. Through dance, drama, music, and visual arts we share with one another our creativity and ourselves.

Participating in the fine arts is an essential part of an early childhood setting. As young children explore and experience their world through the arts, they learn to respond thoughtfully and sensitively to their environment. They develop personal creativity and a sense of aesthetics. They enrich, deepen, and extend their thought and language, their learning, and communication.

Characteristics of the Learner:

- *Unique*
- *Natural explorer, creator, inventor*
- *Enjoys rhythm and movement*
- *Uses all the senses*
- *Responsive*
- *Enthusiastic*
- *Vivid imagination*
- *Inquiring*
- *Enjoys socio-dramatic play*

In order to achieve these goals, the primary program provides children with experiences that help them:

- Develop enthusiasm for the arts.
- Imagine and visualize through the arts.
- Respond through the arts.
- Express and represent through the arts.
- Interpret through the arts.
- Create through the arts.
- Appreciate the arts.
- Think, learn, and communicate through the arts.

Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

Teaching Specialists and the Arts

The arts are an integral part of the early childhood curriculum. The responsibility for integration of the arts lies with the classroom teacher. Experiences in dance, art, music, and drama are a natural means for integrating learning from other content areas. The role of the specialist in music, art, or physical education is to support what is happening in the classroom by extending the learning. It is essential that the classroom teacher and specialists form partnerships and collaborate regularly to design experiences that are connected and meaningful for children.

Developing Enthusiasm for the Arts

The primary program provides children with opportunities to participate in a wide spectrum of the arts. Active participation in dance, drama, music, and visual art fosters children's interest in and enthusiasm for artistic endeavors. It helps children appreciate and understand the creative works of others.

Imagining and Visualizing Through the Arts

Images reflect the wonder of the human experience. Through the arts, children are encouraged to use and enrich their natural ability to create images and to engage in make-believe. Visual art elicits visual representations of personal images, creative dance evokes images through movement, drama involves response to imagined characters, and listening to music gives children aural images of narrative or abstract ideas.

Responding Through the Arts

The arts provide a unique avenue for children to respond to the world through the senses and the imagination. As children respond to a variety of visual, aural, tactile, and kinesthetic stimuli, they develop an array of personal meanings in the art forms as well as ways of expressing ideas and feelings in unique ways.

Creativity cannot be imposed but must come from the child.

Lowenfeld & Brittain, 1975

Expressing and Representing Through the Arts

As children perceive the world around them and respond to the myriad of visual, auditory, and kinesthetic stimuli, they express their reactions and responses. In doing so, they develop a variety of ways of representing what they know. With the teacher's encouragement and guidance, children experience a multitude of different art forms, thus opening up many avenues of expression.

The arts develop the senses, enrich the emotional self, and allow for a richer experiencing of the world. They encourage critical and creative thinking and personalize communication of thoughts and ideas to others. For young children who may not be able to fully verbalize ideas, expression through the arts is especially important.

Through the process of creating beautiful things, children begin to build a foundation for aesthetic appreciation which enriches life.

Lasky & Mukerji, 1980

Interpreting through the Arts

Children relate the experiences of others to themselves as they make sense of the world around them. Interpreting or creating images for others is a way to communicate meaning. Whether children are dancing, painting, modeling, singing, moving to music, or acting, they are communicating their personal responses to a stimulus or idea, and in so doing are learning more about their own feelings and emotions. Through reflection and discussion of their arts experiences, they express their own feelings and begin to interpret the feelings of others. Valuing and accepting children's responses encourages continued learning in the arts.

Creating through the Arts

Creativity is the extension of thought in a new or different way. It is the assimilation and selection of ideas and their reinterpretation or restatement in a personal and individual manner. Encouraging creativity helps children explore their thinking and represent it in many different ways. It helps children express themselves, consciously and subconsciously. It helps children grow and develop toward their full potential.

To foster the creativity of children, the teacher provides an environment that is stimulating, safe and nurturing. Within this framework, children have the chance to try things for themselves, to use their imagination, and to judge their own degree of accomplishment. For both the child and teacher, the prime goal of the activity is not the final product, but the process. For learning is continuous and the final product is only one part of the process.

Appreciating the Arts

Appreciation of the arts begins with the opportunity to experience a rich variety of art forms. Through response, reflection, and discussion, children extend their appreciation of the relationships among art forms, and they learn about the relationship of the arts to society and to the environment. Through this process, children begin to develop an appreciation of artistic endeavor and to form personal concepts and values of what is aesthetically pleasing.

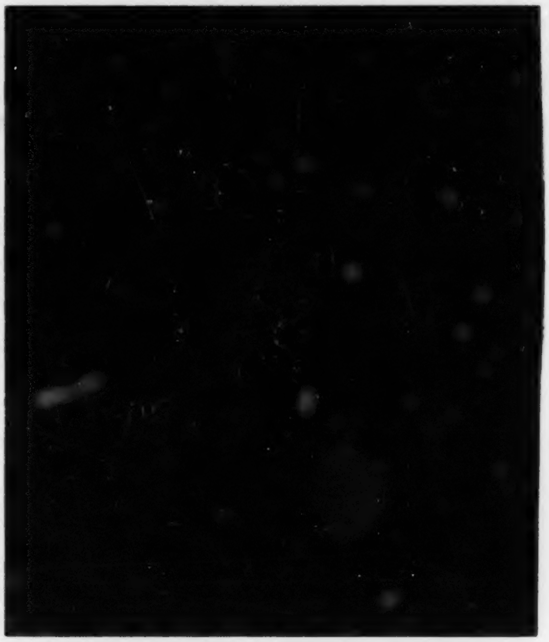
Thinking, Learning, and Communicating Through the Arts

Learning through the arts gives children the tools to make individual aesthetic judgments, to select appropriate personal representations, and to share their artistic vision with others, regardless of the barriers of language and culture.

As children explore a rich classroom environment with multi-sensory experiences provided through the arts, they acquire a variety of new and enhanced ways of thinking, learning, and communicating. These may range from making aesthetic judgments to clarifying and expressing ideas and feelings based on real, vicarious, and imagined experiences.

> *We learn through our senses. The ability to see, feel, hear, smell and taste provides the contact between us and the environment…The greater the opportunity to develop an increased sensitivity and the greater the awareness of all the senses, the greater will be the opportunity for learning.*
>
> Lowenfeld & Brittain, 1975

Since the arts are a means of thinking, learning, and communicating, they complement and foster work in all areas of the primary program. Because they all involve communication, the arts and other curriculum areas frequently can be integrated.



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Social and Emotional Development

Social and emotional competence is the ability to understand, manage, and express the social and emotional aspects of one's life in ways that enable the successful management of life tasks such as learning, forming relationships, solving everyday problems, and adapting to the complex demands of growth and development. Elias, et al., 1997

Emotional, social, and total well-being are interrelated and are essential for growth and development. Social and emotional well-being determine the way we feel, think, and act. They are a precondition for optimal learning. It is important for children to be nurtured and to develop emotionally and socially in healthy ways.

Children come to school exhibiting wide variations in development and a broad range of behaviors. Some children come to school with special needs and may have specific physical, intellectual, or behavioral learning needs. These children are part of the school culture and, like all children, need acceptance, respect, empathy, and understanding.

The early primary setting seeks to develop a positive self-concept in every child. It offers the child opportunities to gain confidence and competence in living with other people and in functioning independently and cooperatively. It provides the child with experiences designed to:

- Develop a positive, realistic self-concept
- Develop independence
- Set appropriate goals and feel satisfaction in accomplishment and effort
- Cope with change
- Share and cooperate
- Develop friendships
- Learn from others
- Enjoy living and learning

Characteristics of the Learner:

- *Unique*
- *Talkative*
- *Friendly*
- *Social*
- *Sensitive*
- *Likes to please*
- *Learning to cooperate and collaborate*
- *Egocentric, moving toward sociocentric*
- *Dependent on adults*
- *Needs reassurance*
- *Resolves inner conflicts, through play and day dreaming*
- *Finds pleasure in regularity and personal routines*
- *Trusts adults*

The teacher is responsible for the climate in the classroom as well as for meeting the individual needs of all students. The role of guidance counselors and social workers is to observe in the classroom and support children, families, and teachers by providing feedback, intervention, and instruction. It is essential the classroom teacher, parents, and counselors collaborate regularly to help children meet program goals.

Developing a Positive, Realistic Self-Concept

The emotional well-being of children is paramount in ensuring that children develop to their full potential. The child who has a positive, realistic self-concept is more likely to feel secure and be capable of making thoughtful and appropriate choices and decisions. The child who is confident is eager for new experiences. Successful learning, in turn, enhances self-esteem.

> *The criterion of social competence does not require that all children be social butterflies. It is not a source of concern if a child chooses to work or play alone, as long as he or she is capable of interacting productively and successfully with another when social interaction is desired, appropriate, or necessary.*
>
> Katz & Chard, 1990

In the primary classroom, children are encouraged to be open-minded, inquiring, and self-initiating. They are supported as they take risks, solve problems, make choices and decisions, and deal with the decisions of others. They are helped to learn from their mistakes and successes. When children grow and develop in an environment that is positive and supportive, they are more enthusiastic, more willing to take risks, and better able to set and actualize their goals.

Developing Independence

The child who is independent is able to make self-governing choices and decisions. In the primary classroom or center, the child who is given opportunities to make choices and decisions and who is learning to work in a self-directed way is the child who is learning to become independent. At first, children may require a good deal of support and guidance because they are more egocentric in their learning and may not have notions of working independently. But, as children grow and learn in a supportive classroom setting, their development is reflected in an increased sense of self-direction and growth in autonomy.

Setting Appropriate Goals and Feeling Satisfaction in Accomplishments and Efforts

As children are encouraged to explore and experiment, to think divergently, and to express differing ideas, they begin to develop a belief in their own abilities as learners. The teacher enhances this learning and helps children understand and value themselves as learners. The teacher supports the child by honoring each child's efforts and accomplishments and by helping children take on increasing responsibility for setting their own goals, directing their own learning, and monitoring and assessing their own progress. Feeling secure and valued in the classroom helps children learn, and it serves to increase their knowledge of themselves as unique and competent people.

Coping with Change

Change occurs constantly throughout life. It can be gradual or sudden, pleasant or harsh, and it may become apparent only in retrospect. For most children, change is a healthy part of life: it stimulates the mind and body. For others, it takes a caring, thoughtful, and sensitive teacher to help them learn to cope with change and to grow emotionally, socially, and intellectually through change.

The teacher is sensitive to the strong feelings and emotions and to the sometimes inappropriate behaviors evoked by sudden, unexpected, or unwelcome change in a child's life. The teacher accepts these as prerequisites to the child's development of appropriate ways of coping and, when possible, guides the child in developing new strategies for coping. It is helpful for children to reflect upon change as they are experiencing it. Children who trust their ability to cope effectively with change have a sense of being more able to manage during change and are, therefore, more likely to react in a positive manner.

Sharing and Cooperating

To live, work, and learn together we must learn to share and cooperate. In the primary classroom, children learn how to function as part of a social network. The classroom is an active workshop where children have many opportunities to cooperate and share materials, ideas, space, and attention. Through activities such as taking turns, sharing, contributing to discussion, following group directions and ideas, and being sensitive to the needs and feelings of others, children become aware of and learn to practice appropriate behavior in a group. The teacher takes into account that children's social behavior is influenced by their developmental maturity, language competence, and problem-solving abilities. The teacher sets reasonable expectations for levels of cooperation and sharing for each child and identifies and allows for specific learning needs. Through observation and interaction with children, the teacher models, reinforces, and teaches the appropriate social attitudes, skills, and behaviors.

Nothing we learn is more important than the skills required to work cooperatively with other people. Most human interaction is cooperative. Without some skill in cooperating effectively, it is difficult (if not impossible) to maintain a marriage, hold a job, or be part of a community, society, and world.

Johnson, Johnson, & Holubec, 1988

Developing Friendships

A capacity for loving others and the ability to seek and give companionship is the basis of all human relationships. The capacity to form friendships begins with the child's own sense of security and well-being. This allows the child to move outward toward others. As primary children learn to make friends, they also learn appropriate ways of being with others in group settings. Learning how to make and maintain friendships is part of the social learning fostered in the early childhood setting.

Learning from Others

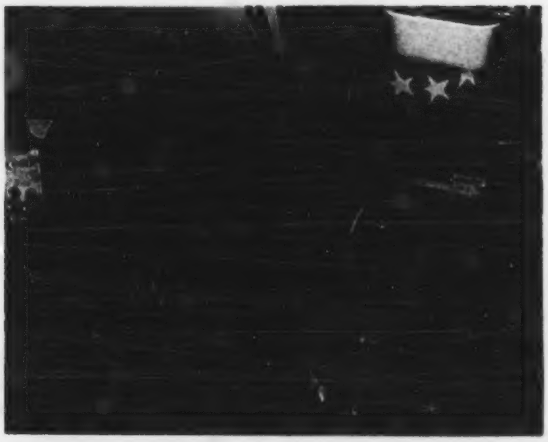
The Primary Program creates continuous opportunities for children to work together. Working with a partner and in large and small groups facilitates learning with and from others. As children grow and develop in the classroom or center, they learn to view the world not just through their own eyes but through a variety of shared viewpoints. Learning to cooperate and cooperating to learn promote individual learning, build self-esteem, enhance interpersonal relationships, and build the concept of community.

Enjoying Living and Learning

If children see themselves as valued members of their classroom community and if they believe in themselves as learners, they are able to embrace all that life has to offer and to see the potential of each new experience.

In the primary classroom or center, acceptance, respect, warmth, caring, and a touch of humor create a climate in which children can embrace new learning with enjoyment and appreciation. When children view themselves as valued and successful, they are developing their potential as lifelong learners.

> *We want to help children examine their feelings and attitudes and challenge them to accept new information and a variety of people into their lives.*
>
> York, 1991



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Intellectual Development

Most children are motivated to learn by an intense desire to make sense out of their world and achieve the competencies desired by the culture Bredekamp & Copple (Ed.). 1997

Intellectual development may be defined as the process of deriving meaning from experience through acquiring, structuring, and restructuring knowledge. It is an integral part of every aspect of our lives. As we assimilate and use knowledge in independent, thoughtful, and purposeful ways, we become able to shape our lives and the future of our world.

The experiences and knowledge which young children bring to school, combined with their natural curiosity and sense of wonder, are the foundation for learning in the primary years. The primary program seeks to build on, extend, and deepen this foundation as the teacher works with children to inquire about, reflect upon, and represent their knowledge.

The teacher provides experiences to help the child:
- Sustain an extended natural curiosity
- Engage in first hand experiences
- Develop thinking through meaningful learning experiences
- Use language to facilitate thinking and learning
- Use language to communicate effectively
- Develop and integrate dispositions/attitudes, skills, and knowledge in various areas of curriculum
- Become an independent, life long learner

Children come to school already active thinkers, possessed of natural curiosity and an eagerness to learn. As children are actively involved in their learning, pursuing topics of personal interest and relevance, asking their own questions, solving problems and reflecting on their own thinking, so they experience the joy of learning and come to believe in themselves as learners.

Factors Affecting Intellectual Development

No single factor can account for intellectual development. It is a combination of the factors and the interaction among them that influences this development. When planning experiences that enhance intellectual development, the teacher takes all of these factors into consideration.

Factor	Characteristics
Maturation	Physical maturing, especially of the central nervous system
Experiences	Handling, moving, thinking about concrete objects and events
Social interaction	Playing, communicating, working with other children and adults
Environment	Home, community, school
Equilibration	The process of bringing maturation, experience, and social interaction together so as to build and rebuild mental structures
Individuality	Learning style, dispositions, prior knowledge, interests, self-concept

Characteristics and Stages of Children's Thinking

Children think differently from adults. They must construct their own knowledge. The teacher, therefore, chooses, plans, and structures experiences with due consideration to children's ways of thinking. Children respond characteristically to different situations and events, depending on their stage of development. While most children pass through developmental stages in the same order, the rate does vary from child to child. Some children may reach later stages at an earlier age, while some function at earlier stages for longer periods of time. The transition from one stage to another is neither abrupt nor final, and learners often respond in ways characteristic of more than one stage at a given time. Some children may never reach the level of normal operational thought or may achieve this level of thinking in only one area of expertise.

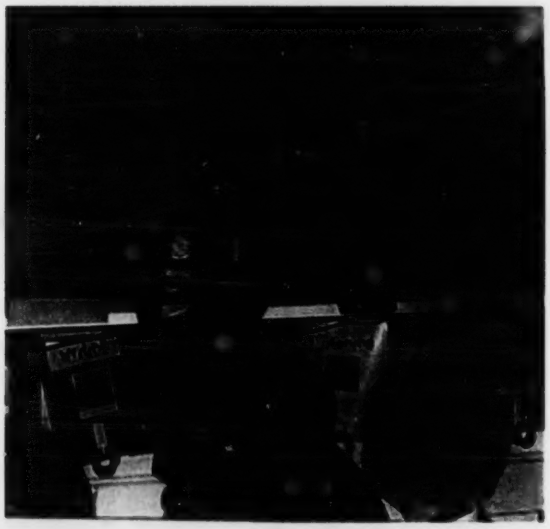
Characteristics of a Learner:

- *Curious, seeking, social human being*
- *Natural explorer and inventor*
- *Thinks differently from adults*
- *Learns best through play*
- *Learns through social interaction*
- *Is developing thinking skills*
- *Represents knowledge in different ways*
- *Clarifies and extends thinking through language*
- *Uses language to communicate*

The thinking process starts with a structure of or a way of thinking that is characteristic of one's level. Some external disturbances or experience creates a conflict or disequilibrium in this way of thinking. When this happens, the child will often rely on established thinking strategies and behavior from an earlier stage of development. In time, the child solves the conflict through further intellectual activity, moving towards a new way of thinking and structuring things, a way that provides understanding, satisfaction, and equilibrium.

"In this process, each person is continuously checking new information against old rules, revising the rules when discrepancies appear, and reaching new understandings, or constructions of reality. In psychological terms, the old rules are the existing cognitive structures. When the old rules and the new information collide, the checking process generates cognitive disequilibrium. The revision is the accommodation that occurs when new rules or new internal cognitive structures are required to replace the old ones, which no longer explain reality. The new understandings and stops along the path of learning that occur when equilibrium is temporarily restored. This process occurs in both the teachers and students, in both academic and social context" (Brooks, 1990).

There are many models and theories to guide us in understanding the development of thinking. As a pioneer in the field of child development, Piaget has provided a model that serves as a springboard to other models. The Piagetian model is included here as a basic reference to consider when trying to understand the development of a child's thinking.



Piaget's Stages of Cognitive Growth

Stage	Ages *	Characteristics
Sensorimotor Thinking	0–2 years	▪ Experiments to discover properties of objects and events ▪ Modifies familiar action patterns to fit new situations ▪ Begins to think before acting ▪ Is developing object permanence and a sense of space
Preoperational Thinking	2–5 years	▪ Is beginning to think before acting ▪ Is egocentric ▪ Perceives parts or wholes but not parts in relation to wholes ▪ Continues to rely on appearance rather than logic ▪ Judges quantity on the basis of space taken by objects and length on the basis of how far one end protrudes ▪ Is constructing concepts by acting on the environment
Transitional	5–7 years	▪ Uses language to direct own activities and activities of others ▪ Begins to see others points of view ▪ Thinking begins to be more logical but relies heavily on real objects and experiences
Concrete Operational Thinking	7–11 years	▪ Still needs real objects to assist with reasoning ▪ Can reflect about events in the immediate past ▪ Understands cause and effect ▪ Can focus on detail and still keep the whole in mind ▪ Develops conservation of number, length, and volume ▪ Is able to reverse thought, understand actions, undo previous actions, predict changes, and anticipate outcomes ▪ Shows increased ability to express and receive ideas in symbolic forms (e.g., words, numerals) ▪ Can focus on more than his or her own point of view ▪ Is gaining further understanding of the sequencing of events
Formal Operational Thinking	11 years-adulthood	▪ Is able to think beyond concrete reality ▪ Draws conclusions not only through direct observation but also through hypothetical statements ▪ Sees own point of view as one of many possible views ▪ Proposes hypothetical experiments and tests these mentally or physically ▪ Is able to think about his or her thinking (metacognition) ▪ Considers abstract concepts (e.g., justice)

* Approximate Age

Engagement in First-Hand Experiences

Children learn best when they focus on and solve problems rising from or closely connected with their own lives. The teacher provides for the child first-hand experiences that include both "hands on" and "minds on" activities. Children's manipulation of objects is critical to development of logical thinking during the years prior to entry into the formal operational state. The more meaningful and varied the child's active encounters with the real world are in the early ears, the stronger the foundations for logical thinking and the greater the receptivity to instruction.

> *When subject matter is dynamic, intellectually intriguing, and personal—when it bestows power to the learner—the 'details' also become important and memorable.*
>
> Tomlinson, 1999

The teacher presents content so children can assimilate it in accordance with their stage of development. For example, too much too soon creates problems of understanding. A child's inability to follow spoken or written directions is not always due to inattention or poor memory: children see and hear what they understand.

The teacher provides experiences that encourage children to develop intellectually as they engage in a variety of first-hand experiences. Children need to have opportunities for active involvement, close observation, thinking, talking with others and, once again, reflecting upon these experiences.

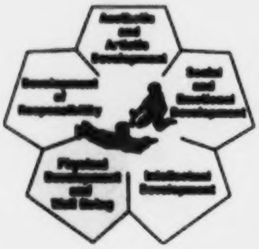
The following chart provides a framework to use when planning learning experiences which foster intellectual development.

Do	**Observe**	**Think**	**Talk**	**Communicate**
▪ Experience ▪ Touch ▪ Explore ▪ Investigate ▪ Experiment ▪ Test ▪ Discover ▪ Follow directions ▪ Seek ▪ Plan ▪ Focus ▪ Attend ▪ Select ▪ Decide ▪ Play ▪ Invent	▪ Seek ▪ Identify ▪ Define ▪ Label ▪ Describe ▪ Count ▪ Note similarities and differences ▪ Note central meaning ▪ Note relationships ▪ Remember ▪ Explain ▪ Generalize ▪ Analyze ▪ Understand	▪ Reflect ▪ Judge equivalence ▪ Compare ▪ Estimate ▪ Develop concepts of space, time ▪ Classify ▪ Seriate ▪ Pattern ▪ Associate ▪ Solve problems ▪ Infer ▪ Know ▪ Make decisions ▪ Think critically and creatively	▪ State needs ▪ State wants ▪ Justify ▪ Monitor ▪ Direct ▪ Report ▪ Predict ▪ Express thoughts, ideas, plans, knowledge, understanding ▪ Clarify	▪ Collaborate ▪ Wonder ▪ Question ▪ Gain information ▪ Interpret central meaning ▪ Criticize ▪ Evaluate ▪ Clarify ▪ Anticipate ▪ Predict ▪ Represent ▪ Dramatize ▪ Write ▪ Share ▪ Cooperate

Physical Development and Well-Being

Play and recreation activities are major contributors to the physical, social, emotional and intellectual development of children. In fact, it is seen to be as important to their growth and development as are the basic needs of nutrition, health, shelter and education. Hum, 1979

Physical well-being is an integral part of total well-being. It is essential for living and learning. The Primary Program provides children with experiences to help them learn about their growth and development. It underscores the interrelationships among physical activity, nutrition, safety, health, and recreation and the child's role in maintaining a healthy life-style.



Children have a natural curiosity about and interest in learning about themselves and their bodies. The teacher plans a balanced instructional program and provides opportunities for a range and variety of experiences which allow for varied responses reflective of ranges and levels of ability. Although young children have somewhat limited control over health, nutrition, and safety factors, they learn about their roles and responsibilities where they do have choices. In the Primary Program, children learn about issues that affect their well-being so they can make informed and responsible decisions about health, nutrition, and safety.

It is important in the development of all children that regular activities for physical development be included in their school experiences. For some children, adaptations will be needed to help them cope with their unique challenges.

The primary program provides experiences that help children:

- Learn and practice safety measures
- Take care of and respect their bodies, avoid abusive substances
- Develop an awareness of good nutrition
- Maintain physical fitness
- Develop an appreciation and enjoyment of human movement
- Learn social skills in a physical activity setting

> *The health and safety of children should be paramount considerations... We help children learn, understand, and observe cautions as sensible behavior.*
>
> Holt, 1977

These experiences throughout the child's day make it essential that the classroom teacher and the specialist in physical education collaborate regularly to provide active learning across the curriculum.

Learning and Practicing Safety Measures

A regard for and appreciation of safety and well-being is essential. The teacher ensures the learning environment is safe and that children are aware of and actively attend to the safety and well-being of themselves and others. The teacher helps children understand their role in maintaining health and safety, and children learn to extend these attitudes, skills, and knowledge into the wider community.

Taking Care of and Respecting One's Body

Healthful living implies regard and respect for one's body. In the primary classroom or center, the teacher builds on the personal habits and attitudes established in the home in the child's early years. With other significant adults, the teacher models and helps children learn about all aspects of healthful living. The teacher provides experiences that help children learn about safety and well-being, care of the body, and nutrition to help them appreciate their own roles in providing for a healthy life.

Characteristics of the Learner:

- *Unique*
- *Active*
- *Energetic*
- *Muscles still developing*
- *Needs mobility*
- *Learns by handling things*

Developing a Wide Variety of Motor Skills While Promoting Physical Fitness

Physical fitness is one component of a healthy lifestyle. The teacher capitalizes on the natural characteristics of children to be active learners and assists in developing a wide variety of motor skills for everyday life and leisure activities. In planning activities that stem from their need to play, move, and explore, the teacher provides children with opportunities for the development of fitness—cardiovascular and muscle endurance, strength, flexibility, and weight management—and an understanding of the need for fitness.

Developing Awareness of and Practicing Good Nutrition

While we are all born with inherited traits which influence our physical characteristics, environmental factors also impact upon our health. One of many important factors in a child's growth and development is nutrition. In early primary settings, learning about food directly through cooking, tasting, and experimenting provides children with hands-on experiences that help them learn best. These experiences are designed to help children understand that optimum growth and development and efficient body functioning are dependent upon appropriate nutritional habits.

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Developing Appreciation and Enjoyment of Human Movement

We value physical accomplishment and respect athletes and artists who push physical movement and activity to the limits of performance. The primary program helps children develop and maintain health and well-being through an appreciation and enjoyment of movement and activity. Young children develop muscle control, coordination, body awareness, space awareness, and physical fitness as they explore and practice natural body movements. Physical development is promoted in a non-competitive environment.

Developing Social Skills in a Physical Activity Setting

Society encourages the development of leisure activities, many of which take place in a physical activity setting. In the primary classroom or center, children learn social skills through games and activities. Being part of a group, working with a partner, operating within rules, collaborating to create new rules, being a leader, sharing, listening, and cooperating are but a few examples of the skills learned through group activities. In the primary classroom or center, each member of the group makes a unique and important contribution in maintaining the goals of the entire group. Caring, thoughtfulness, consideration of others, loyalty, and honesty are nurtured and encouraged.

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Development of Responsibility

As people become more sensitive to others' feelings and more willing to cooperate for the collective good, our planet will become a much healthier and happier place to live, for all of us. Moves in this direction are absolutely essential to ensure a decent quality of life, and to ensure life itself.

Orlick, 1978

Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

The way we view the world and act upon it is directly related to our attitudes, beliefs, and values. Responsibility requires that people understand the interdependence of social and ecological factors and be willing to commit themselves to making a difference. In the primary program, children are helped to move beyond an egocentric view of the world toward appreciating and understanding broader, complex issues and to contributing individually and collectively to solutions. Experiences that help children learn critical thinking, conflict resolution, individual and collaborative decision-making, and a sense of community prepare them to seek solutions based upon awareness and understanding of what it means to be responsible.

The primary program provides children with experiences to help them learn to:

- Value and respect individual contributions and uniqueness
- Value, respect, and appreciate cultural identity, diversity, and heritage
- Accept and demonstrate empathy
- Become responsible members of society
- Respect and care for the environment
- Adapt to a changing world

Valuing and Respecting Individual Contributions and Uniqueness

In order that people throughout the world live in dignity and at peace with one another, a greater understanding of our social, moral, and ecological interdependence is required. We need to appreciate everyone has a unique contribution to make. As children learn about themselves and their culture, they begin to understand that all people possess similar needs, feelings, and aspirations, and that everyone has a contribution to make, regardless of background and ability level. The teacher provides activities to help children increase their awareness of others through understanding the similarities of all people. In this way, children can be helped to understand that diversity adds richness to our society.

Valuing, Respecting, and Appreciating Cultural Identity, Diversity, and Heritage

Cultural identity is an integral part of who we are. As we grow in our understanding and appreciation of ourselves within our own culture, we move from an egocentric view of the world toward awareness, tolerance, appreciation, and understanding of other cultures and their customs, characteristics, and history.

In the primary classroom or center, as children learn to value themselves and reach out to form friendships, they begin to develop an appreciation of others. The teacher provides a variety of activities that foster a healthy development and respect for cultural similarities and differences, always honoring children's backgrounds and experiences. As children learn to perceive others, their first view often is through the lenses of those they love and respect. We need to help children develop respect and understanding of what all cultures share—being human.

By focusing on our similarities as humans, children can learn to accept cultural and individual differences. In this way, children will grow up to respect, honor, and value qualities that contribute to the multicultural fabric of society.

Accepting and Demonstrating Empathy

In their early years, children tend to be egocentric, often viewing and acting upon the world solely on the basis of their own thoughts and feelings. But as children learn to participate in the groups to which they belong—family, school, and community—we help them to realize all people experience similar feelings and need the support and encouragement of others within the group. Through discussion and negotiation, classroom community expectations can be established. Appropriate modeling and demonstration of empathy help children to develop sensitivity to their own feelings and those of others.

Becoming a Responsible Member of Society

Thinking, learning, and living are interrelated as are the individual and society. Learning to cooperate and cooperating to learn in a classroom or center are first steps toward working together to ensure the viability of our global community. The early primary setting helps children understand individual and collective rights and their responsibilities as members of society. Children are given opportunities to interact with others in different contexts for a variety of purposes, to cooperate, to collaborate, and to share in the building of community as tasks are accomplished. In this way, children understand that all actions have reactions and no decision stands alone.

Respecting and Caring for the Environment

For humans to survive as a species requires an understanding of and respect for the natural order of the world. By learning about the social, physical, and biological worlds, children learn to understand the place of humans in the natural order.

The teacher can use everyday events in the surrounding neighborhood and the larger community to help children focus on relevant environmental issues-teaching children, first to become aware of the problems we face in caring for and protecting the planet, and second how to become a part of the solution.

Adapting to a Changing World

Because we live in a rapidly changing world, we are continually faced with decisions that may have lasting impact on people and on the planet. We want children to understand in ways that are age appropriate the difficult decisions that we face regarding the environment. When they are encouraged to assume responsibility for their own actions and the result of those actions with their peers, other people and their environment, they will be prepared to act in thoughtful and responsible ways.

Experiences that correspond to a child's intellectual and emotional development will foster a good rapport with the natural world. "Children learn to empathize and identify with nature in early childhood; then they exhibit a natural tendency to explore in middle childhood; and in adolescence they move into the realm of social action. Curricula that respond to such natural rhythms of emotional and intellectual growth will be more effective than those that fail to capitalize on the inherent tendencies of childhood development."

Our responsibility is to nurture a new generation of environmentally sensitive and regionally grounded children through well-planned and thoughtful environmental education experiences.

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The Primary Program for All Children

Classrooms grounded in best-practice education, and modified to be responsive to students' differences, benefit virtually all students. Differentiation addresses the needs of struggling and advanced learners. It addresses the needs of students for whom English is a second language and students who have strong learning style preferences. It addresses gender differences and cultural differences. It pays homage to the truth that we are not born to become replicas of one another.

Tomlinson, 1999

The primary program responds to the diversity of learners by helping children to understand, respect, and appreciate individual differences. The teacher fosters the belief that all individuals have strengths to share and things to learn from others' uniqueness.

The early childhood setting may be the first place in which children realize how they are like other children and how they are different from others. Children seem to accept these differences and similarities and to know they can succeed when they experience respect and a sense of purpose. This attitude of acceptance without competition fosters growth in ALL. It helps children to realize the benefits of appreciating each other, focusing on how they can work together to find solutions, finish projects, and set and complete goals. Although external differences among people may be obvious, the need for safety, respect, caring, and equal opportunity for learning and growth are universal. By creating environments in which unique abilities and contributions are recognized and celebrated, the heritage, gender, culture and talents of all members are respected.

The primary program is designed to be child-centered and to recognize, value, and successfully accommodate the diversity of individual learners, including children of all ability levels. "The research evidence on these points is very strong; when children of all ability (or achievement) levels learn collaboratively, not only do those of lower and medium ability benefit substantially, but so do those of higher ability" (Anderson & Pavan, 1993). This encompasses boys and girls who are gifted/talented and those identified as having special needs and those with challenging behaviors.

Using differentiated instruction, primary program teachers broaden classroom activities, objectives, and experiences to meet each child's social-emotional and academic needs. "In differentiated classrooms, teachers provide specific ways for each individual to learn as deeply as possible and as quickly as possible without assuming one student's road map for learning is identical to anyone else's. The curriculum guide is a teacher source book that increases the number of learning opportunities available, rather than mandating identical experiences for each child" (Anderson & Pavan, 1993). This autonomous approach to learning in the early childhood setting allows all children the opportunity to reach their potentials without the constraints of a narrow curriculum.

In the end, it is not standardization that makes a classroom work. It is a deep respect for the identity of the individual. A teacher in a differentiated classroom:

- Respects the learning level of each student
- Expects all students to grow, and supports their continual growth
- Offers all students the opportunity to explore essential understandings and skills at degrees of difficulty that escalate consistently as learners develop understanding and skill
- Offers all students tasks that look—and are—equally interesting, equally important, and equally engaging.

A framework needs to be in place that addresses the gender, culture, ability level, language and learning style. Every child who comes through the door of any classroom or center is entitled to support and guidance from adults who believe in developing that child's potential. There are characteristics that all children should expect from the teaching and learning in a healthy classroom. This begins when a teacher:

- Appreciates each child as an individual
- Remembers to teach the whole child, considering individual, physical, social and emotional needs
- Continues to develop expertise
- Links students and ideas
- Strives for joyful learning
- Offers high expectations and many opportunities for scaffolding
- Helps students make their own sense of ideas
- Shares the teaching with students
- Strives clearly for student independence
- Uses positive energy and humor
- Knows that discipline is more covert than overt (Tomlinson, 1999)

Educators can then plan for the child whose needs extend beyond the scope of daily practices.

> "Young children with special needs are a tremendously diverse group…Two certain facts about children with special needs are *they are all children and they all have unique needs.* First, because children with special needs are children, they have needs shared by all children. These include physical needs for shelter, rest and nourishment and psychological needs to be nurtured, safe and accepted. Second, children with (special needs) have needs that are NOT shared by all other children. They need environments that are specifically organized and adjusted…they need professionals who are competent in meeting the general needs of young children…who value working cooperatively with families to meet family needs and to help families promote their child's development" (Bredekamp & Rosegrant, 1992).

The teacher can help children realize their areas of giftedness and can nurture those gifts. Children can also be taught to recognize the giftedness/uniqueness of others and not to be threatened by differences. When all children's gifts are nurtured, when strengths and differences are accepted and celebrated, when learning with and leaning upon others helps individuals and the group to grow, then gender, cultural and ability differences are addressed naturally. Teachers can expect all children to show progress toward a set of standards. When all teachers in every setting are meeting children's needs, progress is continual and all children learn.

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Achieving High Standards

To increase test scores or to be world-class in math and science without empowering students or affirming the dignity of human life is to lose the essence of what we and education are presumably all about ... In the end, our goal must be not only to prepare students for careers, but also to enable them to live with dignity and purpose; not only to give knowledge to the student, but also to channel knowledge to humane ends ... Boyer in Goldberg, 1995

Effective early childhood classrooms provide rich experiences that offer quality content and are appropriate for the learning capabilities of the children. **It is only through the application of appropriate early childhood learning practices that high standards can be implemented and achieved.**

A perception by some that the implementation of content standards is in conflict with established perspectives on early education reflects misunderstanding both of the intent of standards and how to provide effective early childhood programs. Misunderstanding of good early childhood practices by educators can result in teaching practices which do not sufficiently challenge children to reach their highest potential (NAEYC & NAECS/SDE, 1991.) Kindergarten/primary classrooms that are "experientially rich", but "content poor" are unacceptable. Likewise, standards must never be applied in ways that cause any young child to experience repeated failure. Failure is the antithesis of achieving high standards.

Appropriate practice is about **how** children learn, **how** highly competent teachers teach, and **how** family members and school personnel work cooperatively to support each child's learning and development. **Standards are the target. One does not abandon good practice to lead children toward the achievement of high standards.** To do so results in the opposite outcome. Responsible practitioners ensure that expectations remain high, but that teaching practices adapt to the range of capacities of young learners, so that repeated success leads toward higher and higher achievement.

Practices, which have been demonstrated to assist young children in meeting high standards, include:

- Providing high-quality and age-appropriate curriculum and instruction which emphasizes direct interaction with materials, with adults, and with other children.
- Emphasizing early childhood literacy, including outreach by the school to children's families and the community's prekindergarten programs (Snow, et al., 1998).
- Involving children in setting meaningful and accessible learning goals, selecting and managing their learning, and in assessing their learning.
- Employing a wide variety of instructional approaches to assure that the learning levels and individual styles of children are accommodated.
- Reducing class sizes at the primary level to below twenty (Nye, et al., 1994).
- Keeping children and teachers together in heterogeneous groups for more than one year (Katz, et al., 1990).

- Providing professional development that deepens teachers' content knowledge and improves instructional strategies to engage all children in learning.
- Setting explicit expectations for all stakeholders, including families and communities.
- Extending learning time through before- and after-school programs, tutoring, summer programs, and year-round schooling.

Currently accepted practices for working with younger children are based on a newer synthesis of viewpoints about growth and learning and take into consideration what is generally understood about:

- How development and learning unfold in universal or normative patterns
- How the patterns may differ for each individual
- The influence of the family and of the community context, including the language and culture the child brings to school, as well as the expectations of the larger culture for what needs to be learned (Bredekamp & Copple, 1997).

Some educators and members of the public think that setting standards and then only accepting children in school when they are "ready" to achieve them is the way to elevate achievement. In reality, young children are always ready to learn. They have been learning from the moment of birth, are eager to learn more and more, and can achieve quite spectacular things when caring adults (family members, caregivers, and teachers) interact in ways that help them move to that "just manageable" next level of accomplishment.

This concern with whether state and/or local standards are achievable is causing some educators to discuss a return to practices which have been shown to be ineffective in the past. Those include: recommending a change in the kindergarten entrance age to cause children to be older at the beginning of school; screening prior to kindergarten entrance to limit the enrollment of the "unready"; extra-year programs (programs known as readiness or developmental kindergartens and junior, pre-first, or pre-second grade;) and/or recommending grade retention at the kindergarten/primary level. Such practices have been demonstrated through decades of research to be ineffective and continue to have unintended negative consequences for children (Meisels, 1992). Reinstating them will do nothing to improve children's achievement.

The establishment of standards is intended to increase children's opportunities to learn—not to punish them for failing to meet the standard at an arbitrarily determined point in their development. **Educators and parents must work cooperatively to assure that every child receives the support and instruction needed to reach his or her highest potential.**

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Ethics in Early Childhood Education

Above all, we shall not harm children. We shall not participate in practices that are disrespectful, degrading, dangerous, exploitative, intimidating, emotionally damaging or physically harmful to children. National Association for the Education of Young Children, 1998

Ethical behavior should guide decision making of early childhood professionals at all times.

Many things affect the decisions of teachers regarding young children in their care: family values, home culture and language, school or program policies, and society in general. Teachers are constantly making decisions about children. Usually decisions are made with the child's family or other professionals. But, sometimes a situation will not lend itself to a clear answer and educators get caught making a decision between equally unfavorable alternatives. This kind of a dilemma is referred to as an "ethical dilemma." For example:

- Most teachers of young children know that the research related to retention suggests that it is not in the best interest of the child, educationally or emotionally. However, in some situations, grade retention is routinely practiced and encouraged for certain children. If the teacher knows of the research and is forced to practice something against her best judgment, the teacher is faced with a professional dilemma.
- A teacher may feel the employer is not following the state licensing standards for child to adult ratio. If he/she reports the situation, he may be fired, even though he is trying to improve the learning environment and he loves and needs his job. What does he do?
- A school district may require the use of corporal punishment, which is in conflict with an administrator's professional beliefs about positive discipline for children. What should she/he do?

> *Ethics is the science which enables us to understand humanity as it is and humanity as it could be; and then instructs us on how to move from reality to the ideal. To act ethically is to exercise choice which ends in right action. Virtue is the cause of right choice.*
> MacIntyre, 1981

In some cases, solving the problem is a matter of reversing what has been an unacceptable trend or practice. It may be a case of education, training, or communication with all parties. But often there is not a simple answer. Often, "the right answer" doesn't surface or two values are in conflict and the early childhood practitioner feels caught in the middle. We are forced into choosing an answer that doesn't feel right. But in every case, we must focus on doing the right thing, making an ethical decision.

The NAEYC Code of Ethical Conduct can be used to help make difficult decisions. It is a reference to help clarify our thinking and prioritize our responsibilities. Divided into three parts, it is built upon **Core Values** that we hold about **what we ought to do and to be** with young children, the

Principles that define practices, and **Ideals**, or exemplary practice. It is a professional compass for use in making a decision.

The Core Values are "deeply rooted in the history of our field" such as:

- Appreciating childhood as a unique and valuable stage of the human life cycle
- Basing our work with children on knowledge of child development
- Appreciating and supporting the close ties between the child and family
- Recognizing that children are best understood and supported in the context of family, culture, community, and society
- Respecting the dignity, worth, and uniqueness of each individual (child, family member, and colleague).

The **Ideals** guide actions. Conscientious practitioners:

- Are familiar with the knowledge base of early childhood care and education and keep current through continuing education and in-service training
- Recognize and respect the uniqueness and the potential of each child
- Respect the dignity of each family and it's culture, language, customs, and beliefs.
- Establish and maintain relationships of respect, trust, and cooperation with co-workers.
- Create a climate of trust and candor that will enable staff to speak and act in the best interest of children, families, and the field of early childhood care and education

The **Principles** guide our responsibilities. The most important principle:

- ***Above all, we shall not harm children. We shall not participate in practices that are disrespectful, degrading, dangerous, exploitative, intimidating, emotionally damaging or physically harmful to children.***

This principle has precedence over all others in the Code.

The *Code of Ethics* should guide our daily work with young children. It should be used when we make decisions and set policies. It defines our responsibility to support children—*without harm*—to reach challenging and achievable goals. It can be used to open a dialogue when we face difficult decisions. It can be used to help us 'think aloud' and reflect with colleagues who share our concern for children. As a profession, we must hold ourselves to the highest standards in order to provide safe, healthy, nurturing and responsive settings for children when making decisions.

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Note: *The content of the position statement was adapted with permission from* NAYEC's The Code of Ethical Conduct, which is included at the end of the position statement section.

Home, School, and Community Partnerships that Work

The model of school, family, and community partnerships locates the student at the center.
Epstein, 1997

Children learn best in schools that support academic excellence and that encourage partnerships among school staff, families, and community members.

Effective partnerships are based upon mutual collaboration and communication. Schools, families, and children want these home-school connections. Research has shown that, in most cases:

- Families want their children to do well in school and want to be involved in their child's education.
- Teachers and administrators want family involvement.
- Children want their schools and families to communicate with one another (Epstein, 1997).

School-family-community connections benefit everyone involved. Families give their children a clear message that learning is an important and respected endeavor. Schools give their students a clear message that the involvement of all families is valued. School administrators demonstrate their respect for other viewpoints by implementing a partnership model in which staff, family members, and community members are offered genuine roles in important decision making.

Family and community involvement in the schools has the added benefit of extending the boundaries of learning beyond the school building. Such involvement can lead to a better understanding of both school and community needs. School staff, family members, and community members are encouraged to become advocates for the schools and the community and to work together for school and community improvement.

Too often schools fail to recognize and remove barriers that limit family and community involvement in the schools. The scheduling of meetings and events during the traditional school day, lack of child care for younger children, lack of transportation, language differences, and families' own educational experiences may interfere with greater school involvement (Coleman, 1991). Remedies can be as simple as scheduling meetings at times more convenient to families, providing child care, transportation, and translators, as needed, and creating family friendly spaces within the schools.

Getting families more involved in schools will not necessarily lead directly to better student achievement but may have other positive effects. Epstein (1997) has described six types of school involvement that may lead to changes in students' achievement, attitudes, and/or behavior:

1. Parenting: [to] help all families establish home environments to support children as students

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2. Communicating: [to] design effective forms of school-to-home and home-to school communication about school programs and their children's progress
3. Volunteering: [to] recruit and organize parent help and support
4. Learning at home: [to] provide information and ideas to families about how to help students at home with homework and other curriculum-related activities, decisions, and planning
5. Decision Making: [to] include parents in school decisions, developing parent leaders and representatives
6. Collaborating with Community: [to] identify and integrate resources and services from the community to strengthen school programs, family practices, and student learning and development

After choosing a goal upon which to focus, school staff, family members, and community members can identify the type of family involvement and the strategies that will help them reach that goal.

> *In a partnership, teachers and administrators create more* ***family-like*** *schools…[and] parents create more* ***school-like*** *families.*
>
> Epstein, 1997

Rarely, if ever, can one person working alone create lasting, comprehensive change. Effective school-family-community partnerships require a committed team and a plan for action. The team is most likely to be successful if its membership is representative of all stakeholders. Successful teams also need access to resources and time to meet.

Before developing an action plan, school-family-community teams need to determine what is already working and what needs to be improved. The primary focus of action plans should be student success. Action plans should also contain connections to curricular and instructional reform.

Like rose gardens, school-family-community partnerships need to be nurtured. Partnerships are more likely to be successful when members trust one another, are committed to a common goal, communicate effectively, and share a commitment to the development of individual members' skills and abilities. Effective partnerships also take time. Short term goals and planning should take place within the context of a multi-year plan.

School-family-community partnerships benefit families, schools and the community. The primary beneficiary of these partnerships, however, is the student.

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Building Effective School Teams

The improvement process is sometimes easier than one thinks it is going to be. While change takes time and perseverance, if you have the patience and the will, you can be successful.

Quinn, et al., 1996

The primary purpose of effective school teams is to create and maintain optimal learning environments for children. The team fosters a school climate in which learning is viewed as a natural and joyful activity and all children are seen as learners, capable of working harmoniously, creatively and productively.

What is a school team? Teams are groups of individuals that share several characteristics:

- Connections among members and coordination of team functions
- Clear role expectations and responsibilities for team members
- Commitment to a common goal or purpose (Quinn et al, 1996)

To be effective, school teams must include all of the adults who work with students including teachers, specialists, non-certified staff, administrators, and school board members.

Teams become a way to pool everyone's wisdom.

Tom Rendon, 1999

While school teams can be instantly created by an administrative order, building effective teams requires time, energy, and commitment. Team members need time and opportunities to build trust, to develop relationships with one another, and to establish roles and responsibilities within the team. Teams must also develop structures and strategies for effective communication among team members and with other educational stakeholders including students, families, and other community members. In addition, teams need to be able to accept divergent opinions, resolve conflict, and make decisions in a timely manner. Team building is a continuing effort as teams evaluate their own functioning and movement toward their primary purpose of school improvement.

Effective school teams are able to:

- Articulate the school and/or school district's vision
- Formulate a plan, set goals, and assess their progress as they work to achieve that vision
- Communicate and collaborate effectively within the team and with students, families and other members of the community
- Work together to get necessary resources for themselves and their students
- Evaluate their own effectiveness
- Accept accountability for their actions

Effective school teams function as a whole, and individual team members are both accountable to one another and to the team. "Success or failure is a team event. No outside obstacle is an excuse for team failure, and no individuals fail. Only the team can fail" (Katzenbach & Smith, 1993).

Common barriers to the creation of effective school teams include:

- Administrations not fully committed to the organizational changes required to support a team environment
- Implementation of teams without first addressing the issue of trust
- Unrealistic expectations, including underestimating the time needed to build an effective team (Rendon, 1999)

Effective school teams benefit the staff involved, their school, and the community. Most importantly, effective teams create schools in which the primary focus is helping children learn.

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Active Learning Through Play

Play teaches the child, without his being aware of it, the habits most needed for intellectual growth, such as stick-to-itiveness, which is so important in all learning. Perseverance is easily acquired around enjoyable activities such as chosen play. But if it has not become a habit through what is enjoyable, it is not likely to become one through an endeavor like school work.

Bettelheim in Wasserman, S.,1990

Play is a natural and universal learning activity of children and adults. It is a lifelong need and pursuit vital to all human beings. Play is motivated by an inner drive to imagine, explore, experiment, discover, and learn.

The primary program views play as a critical part of the growth and development of young children. Primary age children learn through play and it is the fundamental means children use to express themselves. Play is closely connected to a child's cognitive, social, emotional and physical development. These experiences give children feedback that helps them to make sense of their world and gives adults insights into a child's development.

Play allows learners to project themselves into the realm of possibility while enabling them to develop, alter, and refine current understandings as they explore, imagine, imitate, construct, discuss, plan, manipulate, problem-solve, dramatize, create and experiment. Through play, children demonstrate their knowledge, represent their experiences, and further explore their world.

The ability to play requires skills that developmentally evolve for each child as they gain play experiences through:

- Initiating play choices
- Maintaining a focus in play
- Staying with an activity
- Creating and experimenting
- Using a variety of play materials and activities
- Enjoying play
- Joining a group and playing with others
- Communicating and negotiating wants and needs

(Educational Productions, Inc., *Hand-in-Hand Video Series*, 1993.)

Teachers prepare the active learning environment with time, space and materials for play. Teachers facilitate play skills as an essential learning experience that supports the needs and abilities of all children. Children learn best when they can choose their own activities. Play is the work of children and should not be considered in conflict with academic learning for children through grade three. Adults provide opportunities for play and learning through the variety of materials and activities they provide. Children engage in the learning because it becomes an expressive activity that results from a desire to make sense of the world in which they live.

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Teaching to the Ways Children Learn

There is no one best way to educate all children. We must discover a child's areas of strengths and characteristic approaches to learning. We must, as much as possible, bring the teaching to where the child is.
Gardner, 1983

Every child deserves having materials and information presented in such a way as to best engage that child in his/her own learning. To ensure success of all children educators must be knowledgeable of how children learn; be able to identify a child's strengths; and be able to develop strategies and techniques that encourage each child's learning.

Much has been discovered through the years as to how a child learns.

- **Piaget**—A sequential flow occurs through stages of development at individual rates. Learning is based on relating new experiences to prior knowledge. Concrete, hands-on experiences/activities work best to develop a pattern of problem solving and logical thinking.
- **Vygotsky**—Language and thought are interrelated and interdependent. An integral process of language as a means of structuring and representing knowledge is strongly supported. The "zone of proximal development" suggests the support/assistance needed for children to continue to stretch beyond what they can comfortably do.
- **Constructivists**—Learning is an ongoing experience where children continually act upon and organize their experiences as they try to make sense of their world. The cycle of learning starts with awareness, moves to exploration, to inquiry, to utilization and on to new awareness.
- **Brain Research**—The neuroscientists are discovering individual uniqueness in how the brain takes in, sorts, stores, and uses information. Optimal age ranges for learning specific information have been suggested. Information must be meaningful and engage the child for learning to occur.
- **Multiple Intelligences**—Each person has multiple types of intelligence. Each person has more dominance in some areas of intelligence than in others. The areas of dominance suggest the preference for learning style and method of processing information.
- **Learning Styles**—Children think and learn in many different ways. While all children can and do learn, there are variations in how they concentrate, absorb, process, and recall information.
- **The Value of Play**—Play is the fundamental, natural, universal activity of children. Understanding the stages and development of play guides teachers in their program planning.

- **Active Learning**—Learning occurs more easily for children who are fully engaged in meaningful activities.
  - Children choose from available activities, materials, and experiences for a substantial portion of the day
  - Experiences are meaningful and learner-centered
  - Children have opportunities to ask questions, solve problems, and think independently
  - There is a range of expectations for all children
  - Children have opportunities to make decisions and to be creative
  - Learners are respected and trusted
  - Adults learn along with children
  - Mistakes present opportunities to learn
  - Content areas are integrated
  - Assessment is a part of the daily routine

Research suggest that each child is born ready to learn, has his/her own rate of development and has individual strengths and weaknesses. These findings continue to reinforce the uniqueness of each child. One of the greatest challenges of educators is ensuring the success of all children. Teaching must be based on how the child learns.

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School Readiness

...reaching the school readiness goal will require a twofold strategy: one part focused on supporting families in their efforts to help their children get ready for school, and the second on helping the schools to be responsive to the wide range of developmental levels, backgrounds, experiences, and needs children bring to school with them. Katz, 1991

Schools must be organized around the belief that children are always ready to be nurtured and accepted, to learn, and to be successful. Children's early success in school is the responsibility of parents, communities and schools. Neither schools alone, nor parents alone, nor communities alone can produce students who meet high standards. Positive home and preschool environments and responsive schools are necessary to assure that all children enter school ready to learn and stay that way.

Concerns about school readiness in our country arise from a set of socially constructed notions about going to school and not about characteristics inherent in the child (Graue, 1993). In other words, perspectives about readiness have their sources in the particular belief systems parents and educators have about child development and the functions of schooling. Delayed kindergarten entrance results when parents and educators worry that the increasing curricular expectations in the kindergarten will compromise children's prospects for success.

Inequities in the early experiences of children who are poor, who are learning English as a second language, and who otherwise do not have the support for their early development typically available to more affluent groups, are exaggerated when such children are the youngest in a class group. Bringing school entrance ages into harmony with compulsory attendance age would assist in reducing these differences and provide all children with more equitable opportunity for early success in school.

Parents continue to focus their worries about school readiness on younger males (Bellisimo, Sacks, & Mergendoller, 1995). This may be explained by other studies that show that girls are more likely to demonstrate literacy skills thought to lead to early achievement (knowing letter names) and small motor skills (buttoning own clothes) earlier than boys (Zill, Collins, West, & Hausken, 1995). Other research on both social adjustment of younger children and on academic and physical skills do not show differences significant enough to warrant holding children back (Spitzer, Cupp, & Parke, 1995).

A more productive way to think about readiness is to shift thinking from "Are they ready to enter?" to "What must we do to make sure all children can be successful?" This perspective places responsibilities on adults—parents, educators, and policy-makers—to shape the early home and community environment to support children's development and learning.

The National Education Goals Panel has provided a comprehensive framework to think about the aspects of children's early development that must be in place to assure success in school. Specific academic skills often thought to be prerequisites for school success can easily be learned by children whose needs in five areas have been met. The areas are: 1) Health and physical well being; 2) Social and emotional well being; 3) Approaches to learning; 4) Language development; and 5) General knowledge about the world around them (Kagan, Moore, & Bredekamp, 1995).

Schools can play a major role promoting learning readiness through policies and strategies designed to improve learning climates for young children from preschool through the primary grades.
Ready schools:

- Smooth the transition between home and school
- Strive for continuity between early care and education programs and elementary schools
- Help children learn and make sense of their complex and exciting world
- Are committed to the success of every child
- Are committed to the success of every teacher and every adult who interacts with children during the school day
- Introduce or expand approaches that have been shown to raise achievement
- Are learning organizations that alter practices and programs if they do not benefit children
- Serve children in communities
- Take responsibilities for results
- Have strong leadership

(Shore, 1998).

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Tracking and Retention

Attacking the very real problem of low achievement with retention makes for more compelling political rhetoric than advocating more complex and costly strategies for quality education. Denigrating promotion by calling it social might do something for political campaigns, but it surely does nothing to improve schooling for the children who need it most.

Oakes, 2000

The fact is that neither social promotion nor retention alone can foster student success. Neither takes into consideration new insights regarding how students learn. Research on year-round schooling, ungraded primaries, and different uses of time in school suggest that the debate on social promotion is another example of how we are trying to make the practices of the early and mid-20th century work for the 21st century (National Association of State Boards of Education, 1999).

Retention should not be perpetuated on the basis of false assumptions as to its educational benefit to young children. Further, policies that delay children's entry into school and/or segregate them into extra-year classes label children as failures at the outset of their school experience and are simply more subtle forms of retention. Not only is there a preponderance of evidence that there is no academic benefit from retention or tracking in its many forms, especially for young elementary age children, but there are also worrisome threats to the social-emotional development of the child subjected to such practices.

Although research does not support grade retention, many educators and parents do. Sometimes it is true that teachers do see children who have been retained, placed in extra year classes, or held out of school for a year making progress. It is also true that they have no opportunity to see how well the children might have progressed had they been promoted or moved along with their age-mates. The vast majority of control-group studies that are structured to measure this comparison come down clearly on the side of promotion. Students recommended for retention but advanced to the next level end up doing as well as or better academically than comparable non-promoted peers. Children who have been retained demonstrate more social regression, display more behavior problems, suffer stress in connection with being retained, and more frequently leave high school without graduating.

Policies sanctioning retention should be highly suspect given the lack of demonstrated effectiveness and prevalent bias against certain groups of children (e.g., young-in-grade males, children of color, English language learners). The current methodology used in selecting students for retention or tracking makes it impossible to predict accurately or equitably who will benefit. Given the natural variability in children's developmental patterns in the early childhood years and the widely acknowledged unreliability of testing young children, it is unlikely that valid and reliable processes for determining who might benefit from being retained or otherwise held back can ever be applied with surety.

Pro-retention policies as a strategy for establishing rigorous academic standards are likely to be self-defeating. The lowered expectations parents and teachers develop toward retained children decrease the probability that such children will ever attain their potential. Rhetoric around the term "ending social promotion" (which has increased dramatically in the standards-based climate of today's schools) creates a climate that supports an increase in retention. The only circumstances under which it may be useful to urge the end of "social promotion" is when there is a clear understanding that we know many strategies for improving children's achievement that we are not using fully and which are less costly in both human and financial terms than retention. These include:

- Participation in high quality preschool at age three and four
- Improving the quality of infant/toddler child care settings
- Participation in full time kindergarten
- Lowering class size
- Access to tutoring outside of class time
- Participation in summer programs and/or year-round schooling
- Participation in after school programs
- Multiage grouping/looping/ungraded primary
- Professional development designed to institutionalize more effective teaching practices

> The educational community can no longer afford to ignore the consequences of policies and practices which: 1) assign the burden of responsibility for failure to the child, rather than the program; 2) place the child at risk of further failure, apathy toward school, and demoralization; and 3) fail to contribute to quality early childhood education. Ending conditions that prevent all children from learning the most they can must be a priority for us all (National Association of Early Childhood Specialists in the State Departments of Education, 1987).

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Assessment of Young Children

Young children are notoriously difficult to assess accurately, and well-intended testing efforts in the past have done unintended harm. National Education Goals Panel, 1998

Good assessment is an important, integral part of good teaching. Assessment practices must be appropriate for young children and must be intended for the purpose of ultimately benefiting children's learning and well-being. High-stakes accountability testing of individual children is not appropriate before the end of third grade.

The current climate which demands greater accountability and enhanced educational performance, presents teachers and administrators with decisions about how to implement assessments that are appropriate for young children, and at the same time, responsive to the legitimate demands from parents and the public for clear and useful information. Knowledge about assessment and the unique development of young children is essential for making the right decisions.

Group-Administered Standardized Achievement Tests—As evaluation tools for young children, achievement tests are not adequate for showing how or what students are learning, the kinds of help they need, or the quality of teaching they receive. Group-administered, standardized achievement tests often fail to measure much more than children's test-taking ability, and ***should not be used to make important educational decisions about young children.***

Assessment and the Unique Development of Young Children

Assessing children in the earliest years of life-from birth to age 8-is difficult because it is the period when young children's rates of physical, motor, and linguistic development outpace growth rates at all other stages. Growth is rapid, episodic, and highly influenced by environmental supports: nurturing parents, quality care-giving, and the learning setting.

Because young children learn in ways and at rates different from older children and adults, we must tailor our assessments accordingly. Because young children come to know things through doing as well as through listening, and because they often represent their knowledge better by showing than by talking or writing, paper-and-pencil tests are not adequate. Because young children do not have the experience to understand what the goals of formal testing are, testing interactions may be very difficult or impossible to structure appropriately. Because young children develop and learn so fast, tests given at one point in time may not give a complete picture of learning. And because young children's achievements at any point are the result of a complex mix of their ability to learn and past learning opportunities, it is a mistake to interpret measures of past learning as evidence of what could be learned.

For these reasons, how we assess young children and the principles that frame such assessments need special attention. What works for older children or adults will not work for younger children; they have unique needs that we, as adults, are obliged to recognize if we are to optimize their development.

Source: Shepard, L. A., Kagan, S. L., & Wurtz (Eds). (1998)

In order to help young children learn, assessment must be a part of the regular classroom program in which teachers who know the children are the primary assessors. Standardized, multiple-choice achievement tests are developed by large publishing companies that have no connection to local curricula and are not accountable to local communities. By eliminating the use of standardized tests for evaluating students and using appropriate methods instead, we can significantly improve the quality of education for young children (Fair Test, 1991).

Screening and Diagnostic Assessment-Screening and developmental assessments are used for referral and identifying disabilities and special needs of children. The purpose of identification is to provide follow-up intervention with appropriate health, educational, and special services to ensure that children benefit from support for optimum growth and learning.

Screening assessments are intended to be used only for referral purposes, and should never be used for making instructional decisions, to identify children for special education, or to show growth across time. In-depth, diagnostic testing must be administered by trained specialists, and the results must always be considered within the context of multiple sources of evidence from multiple settings. Follow-up services and educational experiences must be carefully coordinated among teachers, parents, administrators, and service providers.

Harmful Effects of High-stakes Assessment—As a result of inappropriate uses of assessment instruments, or use of a single test to make "high-stakes" decision, all too often children are tracked into high or low ability groups, retained at grade level, placed in extra-year classes, or screened out of "regular" classes and mislabeled or sorted into "special" classes. Such practices are not beneficial to children, and indeed are more often harmful to them (Meisels, 1987; Shepard & Smith, 1989; Shepard, Kagan, & Wurtz (Eds.). National Education Goals Panel, 1998).

Furthermore, in some instances, high-stakes tests are used to determine school rankings and merit pay for teachers. If tests play a significant role in grade advancement and are the primary basis for school's so-called accountability, teachers feel compelled to spend considerable time preparing children to take tests. In such cases, the tests consume much of the school curriculum. Valuable instructional time is lost in preparing for tests by reading isolated paragraphs and answering multiple-choice questions. Opportunities for higher level thinking are lost when time is spent not on posing problems for which math might be used, and not in the process of coming to a natural understanding of math concepts, but on reviewing skills such as addition, subtraction, and division—all in isolation. Decisions about instruction and assessment must be made in the context of supporting learning for all students (Perrone, 1991).

Making Decision About Testing and Other Assessments—Teachers must make instructional decisions based on their understanding of each child's learning needs and how to best support each child. This requires ongoing assessment and evaluation through 1) observation of process,

2) observation of products, and 3) communication and interaction among teachers, children, and their families. Good instructional decisions are dependent on teachers' knowledge and skills in assessment and evaluation to support optimum learning for every child. (Bowman, Donovan, & Burns, 2000; Bredekamp & Copple, 1997; Hohman & Weikart, 1995; Meisels, Jablon, et al., 1994; NAEYC & NAECS/SDE, 1991; NASBE, 1988; NAECS/SDE, 2000; Stiggins, 1997, 1999).

Administrators of early childhood programs who consider the use of standardized tests must ask themselves how children will benefit from testing. Why is testing to be done? Does an appropriate test exist? What other sources of information can be used to make decisions about how best to provide instruction and services for an individual child? How can information about student progress be best collected and most clearly reported to parents, the board, and the community? In answering such questions, administrators should apply principles of meaningful assessment and evaluation grounded in knowledge about how children develop and learn.

In order to avoid inappropriate interpretations and uses of assessment, a clear understanding about different types of assessment and their different purposes is essential. Keeping in mind that "well-intended testing efforts in the past have done unintended harm," school administrators, teachers, and governing boards must not lose sight of considering the ultimate benefit to children's learning and well-being.

(Note: In Nebraska, screening/readiness testing in connection with entrance to kindergarten is prohibited and group-administered, norm-referenced standardized tests are prohibited below Grade 2.)

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Class Size

Reducing class size to below 20 students leads to higher student achievement. This is particularly true in kindergarten, first, second and third grades.

U.S. Department of Education, 1998

The above and following were stated in May, 1998, as part of a very comprehensive research document that was released by the U.S. Department of Education called: *Reducing Class Size: What Do We Know*. Analysis of twenty years of research on class size found the pattern of research findings points more and more clearly toward the beneficial effect of reducing class size.

The following are the findings:

- A consensus of research indicates that class size reduction in the early grades (kindergarten through third) leads to higher student achievement.
- The most significant effects of class size reduction on student achievement appear when class size is reduced to between 15 and 20 students.
- The greatest results were achieved when the teacher workload was reduced to under 20 rather than the adding of associates to larger classrooms.
- The related student achievement moves the average student from the 50th percentile up to somewhere above the 60th percentile. For disadvantaged and minority student the effects are somewhat larger.
- Student, teacher, and parents all report positive effects from the impact of class size reduction on the quality of classroom activity.
- The focus on the early grades suggests that smaller classes represent a preventative, rather than a remedial approach.
- Teachers will need professional development opportunities to optimize the potential benefits of smaller classes.
- While research indicates that class size reduction leads to higher student achievement, it must also be recognized that the quality of instruction plays a major role. Ongoing professional development for teachers will maximize student achievement results.

Tennessee's Project STAR is the most cited long-term research on class size. It found children in small classes outperformed students in larger classes in both reading and math on the Stanford Achievement Test. Students in small K–3 classes had better high school graduation rates, higher grade point averages, and were more likely to enroll in post secondary education.

"Small classes in early primary grades benefit students and provide a basis for substantial education reform without necessarily requiring massive infusions of funds. Consider some potential cost saving from using small classes in grades K-3:

- Fewer retentions
- Less need for remediation and/or special education
- Improved behavior
- Increased achievement" (Achilles, 1996)

Benefits of Smaller Classes

Benefits to the student in a smaller class:

1. Each student receives a larger portion of the educational resources represented by the teacher's instructional time.
2. There is more time for each student to contribute while other listen.
3. Students develop better relationships with their classmates and with their teacher.
4. Students receive more individualized attention.

Benefits shared by teachers, administrators and parents:

1. Classroom atmosphere is improved.
2. Teachers have more flexibility to use different instructional approaches and assignments.
3. Enhanced instruction and assessment:
    * More time to spend in small group
    * More time for individualized instruction
    * More time for child-centered practices
    * Greater opportunity to cover more material in greater depth

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Technology and Young Children

Technology has...power to help students obtain, organize, manipulate, and display information..." "Using technology for meaningful activities also helps integrate a variety of disciplines, more closely resembling activities that people undertake in the world beyond the classroom.
North Central Regional Education Laboratory, 1999

Technology can be defined as the use of a mechanical or electronic means to receive, send or process information. Technology tools might include telephone, television, video, camera, scanners, printers, computers, projection devices, laser disks, CD or be as simple as a calculator. Additional interactive technology might include: internet, e-mail, online discussion groups, video conference by fiber optics, or other formats, hand held devices, automobile communication systems, and cellular phones. These tools assist us in accessing and processing information. The speed, quality, and quantity of information we receive is then communicated to others.

Purpose

Learning takes place when multiple avenues of sensory input connect in the brain to past experiences. This information acquired by the learner then becomes integrated for use in problem solving, reasoning, exploration, analysis, interpretation, and the application of new knowledge.

Children need real-life experiences with real people to benefit from available technologies. Technology should be used to enhance curriculum and first hand experiences (Perry, 1999). Children require an integrated and well-balanced set of experiences to help them grow into capable adults who can handle social-emotional interactions as well as develop their intellectual abilities. When these take place at the appropriate time for the development of the child they become keys to healthy development. As with all other tools, adults must protect children from misuse or inappropriate use.

The purpose of technology is:

- To prepare students for a dynamically changing society
- To facilitate students achieving high standards and quality work
- To provide all students with equity in the availability of information
- To increase student achievement by addressing children's various learning styles
- To allow children to control selection, pace, and level of difficulty in processing information
- To provide interactive experiences which develop curiosity, problem solving and independent thinking skills
- To assist the child in the development of multiple ways to communicate
- To address the brain's preference for visually presented information
- To provide a tool for use in the investigative processes of learning
- To provide another way to communicate learning for assessment

Principles

As the convergence of technologies takes place in our society, the challenge for teachers and students is to develop a literacy with the tools of learning to prepare them for processing information. This improves communications, problem solving, critical questioning, researching, synthesizing and applying knowledge in new and unique ways.

In the use of technology the following principles are relevant to best practice for young children:

- Early childhood professionals use technology to facilitate student achievement.
- Selection of software and hardware is based upon relevance to curriculum, and software is absent of violence and stereotyping.
- Integration of technology with curriculum should be authentic and of interest to the learner.
- A technology rich environment encourages higher order thinking skills, problem solving and collaboration.
- Use of appropriate technology allows time for independent exploration and skill development.
- The selection of technology equipment and materials is based on needs and interests of each individual student.
- Multi-sensory technology tools address the learning styles and adaptive needs of the learner.
- Students using technology are involved in decision making regarding the application to and assessment of their work.
- Teachers acquire in depth professional development and support for implementing the use of technology.
- Equity of access to technology is provided for all learners.
- Educational communities work together to promote the appropriate uses of technology (NAEYC, 1996).

Research and Best Practice

When technologies are integrated into the curriculum as a vital element of instruction to solve real problems dealing with important issues, children gain the ability to use them as natural tools for learning just as they would a pencil, chalk, or paint brush (Shade & Watson, 1990). To maximize the potential of all tools of technology, they need to be viewed on the same level with our other instruments of instruction.

Computers and other equipment for learning need to be in the classroom as opposed to isolated to a hallway or specific room away from everyday activities. Children need to be able to choose the use of such technological tools based upon the work they have to accomplish. When these tools are isolated to laboratory settings for special purposes the impact of their potential is minimized. Their use then becomes a separate unrelated subject called "Computer Literacy."

Interactive technologies become powerful tools when they are used to create multi-media presentations by students or teachers. Open-ended software can encourage children to articulate decision making and planning which leads to greater verbal interactions with others (Forman, 1994, video). The interactive software enhances the decision making process, extends math exploration and problem solving and supports social interactions with collaboration and perspective formation.

Some software labeled "integrated learning" may be only a cluster of activities related to a subject area without consideration for development of concepts and goals.

Technology powerful classrooms have been shown to have positive effects on the instructional process, on basic and advanced skills. To be effective it must become part of the whole educational environment. Studies have shown the following gains made by students (Bialo & Sivin-Kachala, 1996 and Dwyer, 1994).

- Exploration and representation of information was expressed dynamically and in many forms
- Students became socially aware and more confident
- Students communicated effectively about complex processes.
- Students became independent learners and self-starters.
- Students worked well collaboratively.
- Students knew their areas of expertise and shared spontaneously.
- Students used technology routinely and appropriately.
- Students increased writing skills.
- Students gained a better understanding and a broader view of math.
- Students gained an ability to teach others this new knowledge.
- Greater problem solving and critical thinking skills were obtained (Kosakowski 1998).

Considerations

What appropriate use of technology looks like for young children?

- Sending an e-mail to a relative who lives overseas
- Submitting one's story to a children's web site
- Using the internet as a source of news and weather
- Using children's CD-ROM books for exploring and interacting
- Taking a virtual visit to a museum or historical location
- Interacting with a primary source of information, for example, meteorologist, astronaut, congresswoman, librarian, historian, neighbor or relative
- Becoming an explorer of safe informational web sites for problem solving on real world issue; for example, how to assist in a project on endangered species
- Listening to a story she write being read back to her (especially useful for children with visual impairments)
- Using the Internet for evaluation and ordering of consumer goods.
- Creating a multi-media presentation of a group project
- Using the tools of technology for student-led conferences
- Creating pieces of art, music, or literature using the tools of technology
- Understanding there are quality sources of information and how to recognize them among the vast amounts of information available
- Keeping a personal portfolio of work
- Using the informational tools of technology to sort, order or classify information for a real world problem
- Communicating and transferring information using multiple tools of technology

What inappropriate use of technology looks like for young children?

- Using a computer for reasons other than planned, goal specific work or related exploration
- Expecting students to operate equipment without receiving the adequate instruction on operation and application
- Expecting students to rely only on their peers for support and coaching
- Using technology exclusively for learning concepts and skills, without teacher instruction
- Not providing an environment for exploration that is free of violence and stereotyping
- Expecting children to grasp concepts from skill and drill software
- Not allowing students the use of technology for authentic work in problem solving real issues
- Using technology exclusively for training in computer literacy skills
- Using the computer as a reward or means of discipline

The rapid growth rate of technology continues to challenge educators in professional development. As a facilitator of appropriate use and exploration of technology, educators need not feel overwhelmed by every new piece of hardware or software. By becoming a co-learner in inquiry/investigation processes, the educator models appropriate use of multiple media resources. Students then gain insight and experiences in processing information.

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Grouping for Learning

As perhaps never before in world history, individuals are being valued for their ability to connect with other individuals and to help the groups to which they belong to be harmonious and productive.

Anderson & Pavan 1993

Children benefit from flexible grouping which allows the teacher to instruct students on the basis of interests and learning needs. When children are grouped by their interests more often than by other characteristics (such as skill level) the opportunities to learn from each other are maximized. Children need chances to learn cooperatively and to experience the value of collaboration. Ultimately, social interaction leads to better understanding and a consolidation of learning.

Students achieve best when groupings are varied and flexible. Groupings should provide opportunities for each child to interact with a variety of children and adults. It must not involve tracking, extra year programs and retention.

The composition of groups affects not only how and what children learn but also the way children feel about themselves and the way they relate to each other. Long-term, static ability grouping affects children negatively. Anderson & Pavan (1993) suggest that teachers:

- Assign students to heterogeneous classrooms.
- Regroup for homogeneity for teaching specific skills only.
- Assess children in skill groups frequently so those no longer needing such instruction will be assigned to different groups.

Tracking, the sorting of children by ability or prior performance for long periods of time, and retention, repeating the same grade or course, are harmful to children. Reports in 1985 by Oakes (cited in Saphier & Gower, 1997) state, "Well documented examinations of tracking in the U.S. show conclusively that low track students are systematically disadvantaged by low expectation, less opportunity to learn, less interesting materials, and less interesting teaching." Tracking is unnecessary when the teacher accepts children's current levels of functioning and then focuses on helping them progress from there during each school term. Instruction is designed to meet the individual needs of each child instead of relying solely on grade/age level objectives.

Extra year programs are a form of tracking which isolates children from peers based on external factors. This is especially true for boys and youngsters of color. The composition of groups affects not only how and what children learn but also the way children feel about themselves and the way they relate to each other. Saphier and Gower show that, "The damage to self-esteem and motivation that befalls elementary children labeled 'low-track' is deep and permanent and shows up later in secondary school performance. The cost is not only their self-esteem, but also their interest and motivation."

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Code of Ethical Conduct

Position statement of the National Association for the Education of Young Children. Adopted 1989, amended 1997.

Preamble

NAEYC recognizes that many daily decisions required of those who work with young children are of a moral and ethical nature. The NAEYC Code of Ethical Conduct offers guidelines for responsible behavior and sets forth a common basis for resolving the principal ethical dilemmas encountered in early childhood care and education. The primary focus is on daily practice with children and their families in programs for children from birth through 8 years of age, such as infant/toddler programs, preschools, child care centers, family child care homes, kindergartens, and primary classrooms. Many of the provisions also apply to specialists who do not work directly with children, including program administrators, parent and vocational educators, college professors, and child care licensing specialists.

Core Values

Standards of ethical behavior in early childhood care and education are based on commitment to core values that are deeply rooted in the history of our field. We have committed ourselves to

- Appreciating childhood as a unique and valuable stage of the human life cycle
- Basing our work with children on knowledge of child development
- Appreciating and supporting the close ties between the child and family
- Recognizing that children are best understood and supported in the context of family, culture, community, and society
- Respecting the dignity, worth, and uniqueness of each individual (child, family member, and colleague)
- Helping children and adults achieve their full potential in the context of relationships that are based on trust, respect, and positive regard

Conceptual Framework

The Code sets forth a conception of our professional responsibilities in four sections, each addressing an arena of professional relationships: (1) children, (2) families, (3) colleagues, and (4) community and society. Each section includes an introduction to the primary responsibilities of the early childhood practitioner in that arena, a set of ideals pointing in the direction of exemplary professional practice, and a set of principles defining practices that are required, prohibited, and permitted.

The ideals reflect the aspirations of practitioners. **The principles** are intended to guide conduct and assist practitioners in resolving ethical dilemmas encountered in the field. There is not necessarily a corresponding principle for each ideal. Both ideals and principles are intended to direct practitioners to those questions which, when responsibly answered, will provide the basis for conscientious decision-making. While the Code provides specific direction and suggestions for addressing some ethical dilemmas, many others will require the practitioner to combine the guidance of the Code with sound professional judgment.

The ideals and principles in this Code present a shared conception of professional responsibility that affirms our commitment to the core values of our field. The Code publicly acknowledges the responsibilities that we in the field have assumed and in so doing supports ethical behavior in our work. Practitioners who face ethical dilemmas are urged to seek guidance in the applicable parts of this Code and in the spirit that informs the whole.

Ethical dilemmas always exist

Often "the right answer"—the best ethical course of action to take is not obvious. There may be no readily apparent, positive way to handle a situation. One important value may contradict another. When we are caught "on the horns of a dilemma," it is our professional responsibility to consult with all relevant parties in seeking the most ethical course of action to take.

Section I: Ethical responsibilities to children

Childhood is a unique and valuable stage in the life cycle. Our paramount responsibility is to provide safe, healthy, nurturing, and responsive settings for children. We are committed to support children's development, respect individual differences, help children learn to live and work cooperatively, and promote health, self-awareness, competence, self-worth, and resiliency.

Section II: Ethical responsibilities to families

Families are of primary importance in children's development. (The term family may include others, besides parents, who are responsibly involved with the child.) Because the family and the early childhood practitioner have a common interest in the child's welfare, we acknowledge a primary responsibility to bring about collaboration between the home and school in ways that enhance the child's development.

Section III: Ethical responsibilities to colleagues

In a caring and cooperative work place, human dignity is respected, professional satisfaction is promoted, and positive relationships are modeled. Based upon our core values, our primary responsibility in this arena is to establish and maintain settings and relationships that support productive work and meet professional needs. The same ideals that apply to children are inherent in our responsibilities to adults.

Section IV: Ethical responsibilities to community and society

Early childhood programs operate within a context of an immediate community made up of families and other institutions concerned with children's welfare. Our responsibilities to the community are to provide programs that meet its needs, to cooperate with agencies and professions that share responsibility for children, and to develop needed programs that are not currently available. Because the larger society has a measure of responsibility for the welfare and protection of children, and because of our specialized expertise in child development, we acknowledge an obligation to serve as a voice for children everywhere.

Complete position statement may be accessed at http://www.naeyc.org/about/position/pseth98.htm.

Partnerships with Families and Communities

Creating effective partnerships between schools, parents, and communities isn't just a nice idea. It's a necessity.
Davies, 2000

Partnerships in education build bridges between families, communities, and schools. As children interact with the people, places and things associated with the family, the immediate community, and beyond, they extend their horizons to develop the attitudes, skills, and knowledge they need to become effective citizens.

In order to provide the best possible education, schools must partner with families and communities. True partnerships are based on mutual respect. Teachers respect and value parents' knowledge and insights about their children. Parents respect and value teachers' knowledge and insights about the learning process and understanding children's educational needs. In a school-family-community partnership, all members of the community recognize changing family needs in order to raise children in an environment that provides the conditions for health, safety, and learning.

Every adult has a stake in the education and welfare of children. It is essential for adults to build bridges in order to work together so children are healthy and safe. It is important to provide children with a rich and supportive learning environment. Schools, families, and community members must recognize these common goals and work together for the sake of children.

How to Build Partnerships that Work: Davies' Three Basic Principles

Successful partnerships are based on reciprocity. This means that all those involved in the partnership—school, family, and community—have overlapping responsibilities for children's learning. Each needs the help of the others in formal and informal structures.

Developing effective partnerships is a democratic process. Partnerships should recognize the different interests, races, religions, and educational status of its participants, and should be prepared to resolve conflicts through the democratic processes of mediation, negotiation, and compromise.

Effective partnerships provide a variety of opportunities. A comprehensive program of partnerships will include such elements as parent education, family support, volunteer activities, good communication, opportunities to participate in decision making, and strategies that foster children's learning at home and in the community.

From: Davies, D. (2000). How to build partnerships that work. *Principal 80*(1)

School-Family-Community Partnerships

A family-centered perspective is essential to the success of the school-family-community partnership. The importance of involving parents in the education of their children cannot be overestimated. Teachers must always remember that parents are the child's first teachers and that a partnership between home and school benefits children, families, and teachers alike.

The unique cultural, ethnic, and language aspects of each community, as well as its rural or urban nature, offer both opportunities and challenges for establishing responsive partnerships. Teachers and administrators must not assume that a lack of parental involvement means non-caring. They must work to understand the barriers that keep some parents from being more involved in their child's education.

Family-friendly schools must reach out to parents and the community to develop multiple ways to work together so everyone benefits and feels valued. Davies (2000) offers five recommendations to help principals build partnerships with families and the community:

Five Recommendations

Look first to your teachers. Teachers are the most important link in the success of any partnership effort. They can provide guidance for families on setting realistic expectations, monitoring and helping with homework. And selecting appropriate books and learning materials. Unfortunately, many partnerships are developed with little or no teacher input. Instead, teachers are told to "just do it," which can doom the effort from the start.

Principals should seek teacher input and encourage teachers to develop their own learn-at-home materials for parents to use. Because parent-teacher conferences have been proven to be an effective way to build trust and cooperation among the partners, they should be held at least twice a year, last at least a half-hour, and focus on student work. The fleeting teacher-parent conferences traditionally held during open houses don't contribute much.

Make your school family-friendly. There is good evidence that schools that are friendly and welcoming to family members have an easier time creating successful partnership programs. Here are some ways schools can create a family-friendly environment:

- Establish a parent or family center within the school
- Offer good, frequent, and user-friendly communication
- Provide good after-school programs that involve parents and community organizations
- Organize social activities for teachers and families
- Provide parent education and family literacy programs
- Have programs that link families to needed health and social services

Obviously, these programs will be more successful if they are accompanied by a friendly and respectful attitude that can be communicated in many different ways: smiles, pleasant greetings, signs and decorations that recognize the different languages and cultures in the community; and a clean, bright, and inviting ambiance.

Reach into your community. If educational equity is the goal, then school and parent leaders must reach out to those in the community who are considered hard to reach. Here are three practical ideas suggestions:

- Train volunteer parents and community residents to visit families at home, where they can provide information about school programs and services, offer ideas about how to help children study at home, answer questions, and respond to requests.
- Go where the people are. Reach out to parents and other family members in community settings supermarkets, hairdressers, churches, mosques, fast food restaurants, social service agencies, and health clinics. In these informal settings, it may be easier to talk to them and listen to their concerns.
- Work with health and social service agencies. This means making information and services more accessible by offering them at the school, an agency, or a convenient community setting.

Seek increased responsibility by families. For any school-family-community partnership to be successful, all three must be accountable. But all families sometimes need help, and many who live in poverty or in unstable settings need more help than others. Principals don't have to be social workers to help these families meet their child-rearing responsibilities. By engaging the help of public and private community agencies and organizations, religious institutions, and employers, the school can work within the community to offer supports and strengthen the ability of families to do the right thing by their children.

Understand that a partnership is a two-way street. School success and community success are linked. Schools reflect their communities and vice versa. Principals can take the lead in connecting education with the community's economic and social development. In this regard, schools and their staffs have much to offer to the community: access to physical facilities, such as computer labs, gyms, meeting rooms, and playgrounds; access to the expertise, talents, and skills of teachers and administrators; students who serve the community through service projects; and training in computer and Internet use for community members.

Schools also are employers, who can hire local residents, and purchasers, who can buy from local merchants. They also are neighbors who can join neighborhood projects such as crime watches, cleanup campaigns, neighborhood gardens, food banks, and cooperative purchasing. Partnerships work best when the relationship represents an exchange of benefits between schools and community organizations.

For schools to really close the educational gap, they need to develop partnerships and implement programs that are carefully designed, with input from all affected groups, that are consistent with the principles outlined above, and faithfully executed. With strong leadership from the principal, this prescription can produce successful partnerships that will change the culture of the school, benefit all participants, and help all students achieve at higher levels.

Six Types of School-Family-Community Involvement

Based on her research identifying six types of school-family-community involvement, Joyce Epstein has developed a framework to assist the development of partnerships and strengthen support for learning. Schools may use the framework to guide their decisions about practices that will help achieve goals and meet the needs of students and families. Each type presents unique opportunities and challenges for expanding the ways schools, families, and communities work together.

- Parenting
- Communicating
- Volunteering
- Learning at home
- Decision-making
- Collaborating with the community

Parenting

Schools provide assistance to families in relation to families' basic obligations to:

- Ensure children's health and safety
- Acquire parenting and child-rearing skills based on understanding child development.
- Supervise and provide guidance for children at each age level.
- Provide positive home conditions that encourage learning and appropriate behavior in school.

Communicating

Schools have a basic obligation to:

- Communicate about the Primary Program.
- Communicate children's progress.
- Communicate in a variety of formats such as memos, reports, conferences, telephone calls, newsletters, informal conversations, e-mail, and websites.
- Communicate frequently so information is timely and in a language understood by all parents.
- Provide oral and written translation in other languages, as needed, to reach all parents.
- Encourage parents to communicate openly to share information and express concerns.

Volunteering

Families help schools when they:

- Volunteer to assist teachers, administrators, and children in the classroom or other areas.
- Come to school to support children's participation in the arts and other school events.
- Attend school workshops and other programs for their own training and education.

Schools encourage volunteerism when they:

- Create flexible schedules and multiple ways for parents to volunteer.
- Match talents and interests of parents to needs of students and teachers.

Learning at Home

Parents support schools and children's learning at home when they:

- Encourage and model positive attitudes toward learning and the school.
- Provide support for learning that is responsive to children's needs and interests.
- Supervise and assist children at home with homework assignments and school-related activities.
- Initiate conversations and activities to support and extend learning related to children's schoolwork.
- Communicate with teachers to exchange ideas and information about ways to best support children's learning.

> *Parent involvement is the participation of parents in every facet of the education and development of children, from birth to adulthood...Parent involvement takes many forms, including the parent's shared responsibilities in decisions about children's education, health and well-being, as well as the parent's participation in organizations that reflect the community's collaborative aspirations for all children.*
>
> National PTA Board of Directors, 1990

Decision-making

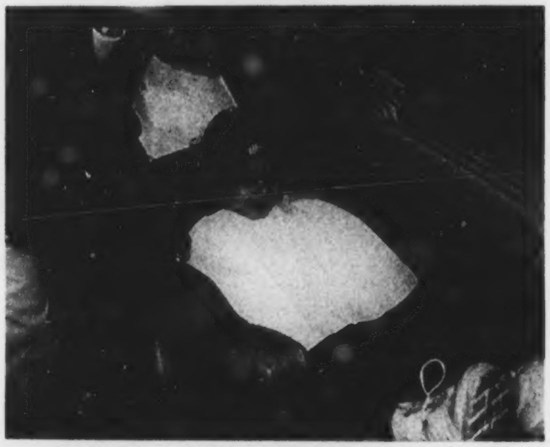
Schools and communities provide parents with opportunities to:

- Assume decision-making roles in the PTA/PTO, advisory councils, committees, and other parent organizations.
- Taking advocacy or decision-making roles at the district and state levels.
- Participate in advocacy groups or evaluation teams that work for school improvement.

Collaborating with the Community

Schools establish partnerships that are mutually beneficial for children, families, communities, and schools when they:

- Coordinate access to resources and services for all families, children, and the school with businesses, agencies, and other groups, such as health care, cultural events, tutoring or mentoring services, before-and-after school programs.
- Provide services to the community, such as recycling, food pantries, access to school libraries and computers.



Using the work of Epstein and others allows families and schools to build upon a variety of options for parent involvement. The school welcomes participation at whatever levels families choose. Schools are encouraged to build upon the strengths of families and support the efforts of parents to become more involved in their children's learning.

Family-school interactions must be well-planned, and, at the same time, consist of both planned and spontaneous opportunities. A true family-school partnership is ongoing, purposeful, and reflects the vision shared by families and schools for children.

Home and school are of primary importance in the lives of children. Each provides unique and essential support for children's learning. Combining and coordinating the efforts of families and schools creates a powerful force that results in high quality programs for children.

School Attitudes and Actions that Encourage Parent Involvement

Teachers and other school personnel who work with children in the primary program should:

- Involve parents in setting goals for their child's learning program; parents who have ownership in the planning will assume more ownership in the follow-through.
- Value parents' opinions, concerns, ideas, and visions.
- Recognize that parents care very much about their children.
- View parents as key contributors to their child's school experiences. Consider parents' resources and talents when planning day-to-day activities for children.
- Find ways to collect information from parents that can be used for developing the child's learning program. For example, home visits, interviews, phone calls, and contributions to the child's portfolio.
- Share information about how children learn and child development as it relates to the classroom setting.
- Involve parents actively in parent-teacher conferences. For example, joint conference planning, pre-conference phone calls, and interviews.
- Talk regularly with children and encourage them to share information with their parents.
- Communicate regularly with parents about the Primary Program through the children and through print materials, phone calls, home visits, informal parent gatherings, and parent education workshops.
- Use problem-solving strategies with parents.
- Appreciate and respect family values which may be different from their own.
- Refrain from criticism and judgment, both publicly and privately, in school facilities such as the teachers' lounge and other settings.
- Maintain a warm, friendly, open, and responsive school climate that encourages parents to spend time at school.
- Provide opportunities for parents to interact with other parents and school personnel. For example, family rooms, parent discussion, and support groups.

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Parents are encouraged to:

- Advocate for their child's needs by becoming involved in their child's learning.
- Model and demonstrate enthusiasm for learning.
- Create an environment supportive of learning.
- Take an active role in communicating information that may benefit their child's learning at school.
- Take advantage of daily learning opportunities with their children, reading, parent-child conversations, and family outings.
- Support their child's growth and learning in all five goal areas: aesthetic and artistic development, intellectual development, physical development and well-being, and development of responsibility.
- Become knowledgeable about the Primary Program.
- Take part in classroom activities and support other school events.
- Support their child's growing independence and decision-making skills.
- Advocate for policies which guarantee quality experiences for their children.

Sharing Information about the Child

Informal Conversations

Conversations which parents, teachers, and children have on an informal basis are among the most natural and successful ways of sharing information. They provide opportunities to:

- Share current information about the child and upcoming activities
- Share personal anecdotes and insights
- Give reassurance about the child's efforts and development

Informal Notes and Messages

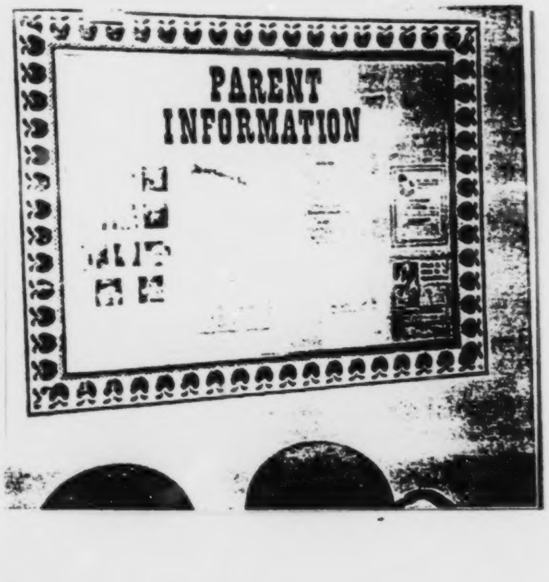
Written informal communications can include:

- Personal notes
- Home-school communication books
- Classroom news bulletins
- E-mail correspondence

Telephone Calls

Parents and teachers may call one another to:

- Keep in touch
- Share news of importance to the child
- Plan how to support some aspect of the child's learning
- Establish a partnership role



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Individual Conferences

Conferences are an opportunity for:

- Parents to share information and insights about their child's development and interests at home
- Teachers to share information and insights about the child's development and interests at school
- Setting goals for the child's learning
- Making plans to support the child's learning

Some teachers encourage children to take part in conferences as a way of helping them understand their learning and to become more responsible for their own progress. Each school and teacher sets the schedule for individual conferences, and parents can request a meeting any time.

Collections of Work

Establishing collection systems to store information about what a child can do provides a basis for ongoing assessment and evaluation. Consider:

- Dated samples of drawings and writing
- Copies of reports and projects
- Photographs
- Audio and video tapes
- Computer disks
- Student self-assessments

Anecdotal Reports

The anecdotal progress report describes the child's development in relation to the goals of the Primary Program. It is intended to provide information about the child's individual progress. It may precede or follow a parent-teacher conference. Anecdotal reports give information about:

- Accomplishments (what a child can do)
- Attitudes and interests
- Learning needs
- Future learning goals and plans for support

Sharing Information about the School and Classroom

Newsletters

Newsletters are one way schools establish ongoing communication and can solicit parent reaction and input as well as provide information about:

- School and classroom activities
- Upcoming events and activities at school and in the community
- Student success stories
- Samples of student work

Parent Evenings and Open Houses

Parent evenings are a time to get a sense of the school and classroom atmosphere. This can be a time for parents to:

- Learn about the goals the school has for all children
- Find out what children are learning as well how they represent learning
- Look at their child's work

Informal Visits

Although the school is the usual place for parents and teachers to exchange information, some teachers plan informal get-togethers in other settings such as:

- Classroom outings (picnics, walks)
- Homes
- Community facilities

Classroom Study

Many teachers provide parents with information about what has been and what will be the focus of classroom learning experiences. These provide information about:

- Themes to be explored
- Classroom projects
- Special activities
- Curriculum plans
- Field trips
- Web sites

Classroom Visits

Classroom visits can be arranged through the teacher to provide:

- Children with a chance to see their parents and teachers cooperating
- Opportunities to talk
- Parents with first-hand opportunities to observe their child in the school setting

Families as Advocates and Policy-makers

Families, teachers, administrators, and other school staff benefit from working together to solve problems, exchange views, influence other decision-makers, and advocate for children. Parents who, individually or in groups, are willing to advocate for their own children or for other children are true friends of the school, not adversaries. Individuals who are willing to be involved need a variety of options for their involvement, training, support, and encouragement. Not all parents wish to be involved in the same role or same degree at all times. Because of the large number of working parents and other changing family demographics, schools need to explore new and creative ways to work together. This partnership needs to be forged through effective and frequent communication. Opportunities for supporting families as advocates, decision-makers, and policy-makers include:

- Establishing a dedicated phone line for families to deal with emergencies, rumors, and sensitive issues
- Encouraging all teachers to communicate frequently with families about curriculum plans, expectations for homework, grading policies, and how families can help
- Directing families' concerns, questions, and complaints to appropriate staff
- Informing families of their rights regarding access to school records, due process in disciplinary actions, and participation in special education decisions
- Setting up teacher-parent conferences upon request
- Providing in-service training or other opportunities to help teachers communicate and collaborate with families
- Notifying families promptly if their children have academic difficulties or behavior problems
- Notifying families immediately if their children do not arrive at school and if unexcused absences are becoming a pattern
- Conferring with families on the choice of classroom settings and/or teachers
- Publishing a handbook for families that covers current policies on discipline, absences, dress standards, and parent and student rights
- Obtaining family input when developing new policies or programs
- Scheduling regular parent-teacher organization meetings
- Encouraging families to approach the principal on their own initiative to question school policies or procedures, aside from situations that affect only their child
- Informing and enlisting the help of families immediately when problems occur at school which involve community concerns
- Establishing procedures for dealing with sensitive issues
- Giving families representation on committees for curriculum development, school accreditation, assessment procedures, and other topics

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Developing Community Involvement in School-Family-Community Partnerships

(This section is reprinted with verbal permission from Decker, Larry E. & Associates. (1990). *Community Education: Building Learning Communities*, pp. 4–8. National Community Education Association, Alexandria, VA.)

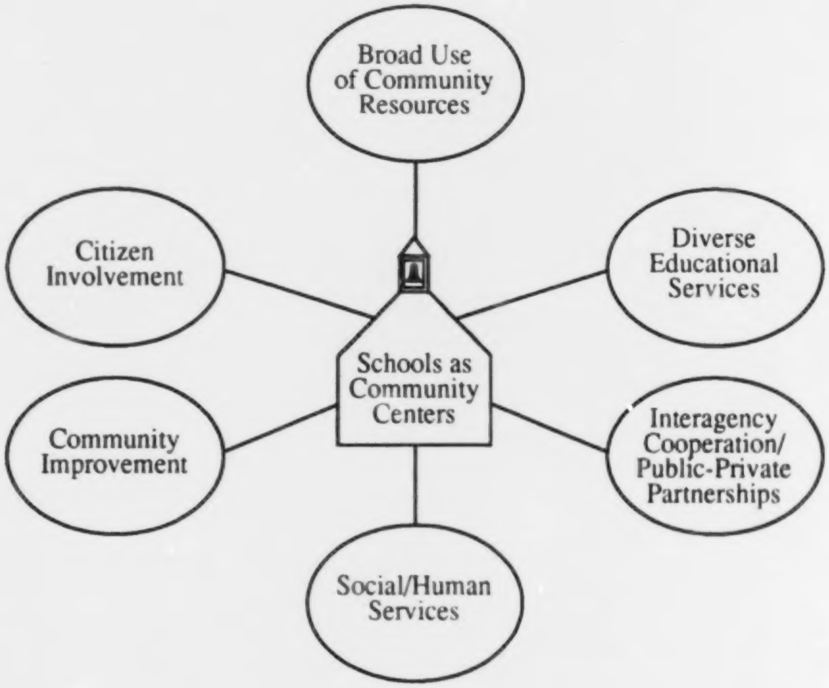
Community Involvement

People develop commitments to causes, organizations, and activities for which they have had some responsibility. An undisputed finding of educational research is that the active engagement of the learner and the involvement of families and the community enhance learning.

In communities across the nation, broad-based community involvement has resulted in increased academic achievement, improved school climate, and more effective communities.

Community Education Goals

In the community education model, the school functions as a support center for the network of agencies and institutions committed to meeting community needs and expanding learning opportunities for all members of the community. Using ***schools as community centers*** is a cost-effective, practical way to use one of the community's largest investments, its school buildings.


Broad Use of Community Resources
Citizen Involvement
Diverse Educational Services
Schools as Community Centers
Community Improvement
Interagency Cooperation/ Public-Private Partnerships
Social/Human Services

By providing ***diverse educational services***, community education helps meet the varied learning needs of community residents. Class instruction in a variety of skills helps meet the needs of business and industry. Child care services for preschool and school-age children help parents who cannot afford or lack access to private services.

Programs that respond to the needs of adults who wish to gain new skills, improve existing skills, or who just like to keep on learning help a community become a learning community. By tapping the abundant expertise that exists in any community, community education helps bring the concept of "everyone learns, everyone teaches" closer to reality.

Through ***interagency cooperation and public-private partnerships***, communities reduce duplication of effort, and overall effectiveness is improved through teamwork. Businesses and private agencies provide services not affordable in the usual tax-supported budget.

In return, schools, in cooperation with other community agencies, address such community problems as illiteracy and substance abuse, which adversely affect the community's business environment and quality of life.

Through ***community improvement efforts***, many members of the community can be engaged in litter control, recycling, beautification, and improved education and recreation services. Each community improvement effort can make the community more attractive to both current and prospective residents and businesses

Through ***citizen involvement***, the process of community problem-solving is restored to its rightful place: to those people closest to the problem, who understand it best.

When a broad range of ***community resources*** is used for learning, the role of the total community in the process of educating the citizenry is acknowledged. Young people learn from and with community elders. Our schools become places where learning and living meet.

Principles of Community Education

Community education provides local residents and community agencies and institutions the opportunity to become active partners in addressing community concerns. It is based on the following principles:

- **Self-Determination**
  Local people are in the best position to identify community needs and wants. Parents, as children's first and most important teachers, have both a right and a responsibility to be involved in their children's education.
- **Self-Help**
  People are best served when their capacity to help themselves is encouraged and enhanced. When people assume ever-increasing responsibility for their own well-being, they acquire independence rather than dependence.
- **Leadership Development**
  The identification, development, and use of the leadership capacities of local citizens are prerequisites for ongoing self-help and community improvement efforts.
- **Localization**
  Services, programs, events, and other opportunities for community participation have the greatest potential for participation when brought closest to where people live. Whenever possible, these activities should be decentralized to locations of easy public access.
- **Integrated Delivery of Services**
  Organizations and agencies that operate for the public good can use their limited resources, meet their individual goals, and better serve the public by establishing close working relationships with other organizations and agencies with related purposes.
- **Maximum Use of Resources**
  The physical, financial, and human resources of every community should be interconnected and used to their fullest if the diverse needs and interests of the community are to be met.
- **Inclusiveness**
  The segregation or isolation of people by age, income, sex, race, ethnicity, religion, or other factors inhibits the full development of the community. Community programs, activities, and services should involve the broadest possible cross-section of community residents.
- **Responsiveness**
  Public institutions have a responsibility to develop programs and services that respond to the continually changing needs and interests of their constituents.
- **Lifelong Learning**
  Learning begins at birth and continues until death. Opportunities for formal and informal learning should be available to residents of all ages across a wide variety of community settings.

Results of Community Education

Communities that formally adopt community education as a way of community life have the tools to attack many difficult problems. These communities exhibit the following characteristics:

- Someone has an official leadership role in coordinating the various community and school efforts.
- Volunteers help deliver community services.
- Businesses work in partnership with schools to improve student learning as well as to expand economic development.
- Agencies and institutions cooperate to deliver improved services to the total community.
- Public school facilities are used by community members of all ages.
- Parents are involved in their children's learning and in school governance.
- Community resources are used to enhance and enrich the school's curriculum.
- Educational alternatives are available for students with special problems and special talents.
- Opportunities for lifelong learning are available for learners of all ages, backgrounds, and needs.
- Large numbers of citizens are participating actively to help solve community problems.

When these characteristics are observed, positive results are not far behind. These results may include:

- Schools and other community agencies are more responsive to parents and other community members.
- An improved learning climate and increased student achievement are evident in schools.
- Broad-based community support exists for schools and for other community agencies.
- The community works together to try to solve its problems.

> *As America strives to improve its schools, it's imperative that all elements of the community work together to assist students and educators. Quality education is an investment in the community; but everyone—parents, business leaders, church leaders and others-have a role to play. Helping students learn is a community affair.*
>
> Lew Armistead, President,
> National School Public Relations Association

Resource Materials for Communicating with Parents

The following materials can be used when communicating with parents about children's learning and development. As teachers develop materials, presentations, and conferences, they can use this information as a guide while personalizing their messages to parents and children. Information might be developed into a series of newsletters, workshops, or incorporated into existing formats. Whatever the setting, it is best to use the information in a meaningful way taking care not to overwhelm parents. Teachers must first know their children and families, then work with them to identify their informational needs. In this way, teachers and schools respect the prior knowledge of parents and their decision-making abilities.

Supporting Learning at Home: Ideas for Parents

The section on Widely-Held Expectations provides a summary of children's development over time in the five goal areas. In schools, teachers use these Widely-Held Expectations to assess children's development and to plan instruction. At home, parents and others can support and encourage the child as a developing learner in a number of ways.

Aesthetic and Artistic Development

Keep a variety of art, modeling, and craft materials on hand. Provide paper of different sizes and colors, including construction paper, newsprint, gummed paper, wrapping paper, aluminum foil, and other recycled materials. You might start a collection of pencils, crayons, felt tip markers, chalk, modeling clay, scissors, glue, transparent tape, used wrapping paper, pictures from old greeting cards, sticks from ice cream treats, bits of cloth, yarn, ribbon, egg cartons, buttons, twist ties, pipe cleaners, and other materials. Encourage your child to spend time exploring their use. Ask what he or she enjoyed most and discovered about the materials.

Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

Encourage your child to accompany musical selections with homemade instruments. If possible, show your child how to record and listen to music using an audiocassette recorder. Remember, this music making will be child-like. Encourage your child to explore sounds and rhythms and to tell you about them and their production.

Attend musical performances, concerts, and recitals with your child. Sing and play selections to be performed before hand. Ask your child what he or she remembered and enjoyed about the performance and why.

Use simple comments that show you recognize and appreciate your child's efforts. For example, "Your painting reminds me of the fun we had at the beach."

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For family fun, play pantomimes or charades. One person acts out an action while the others guess what is being done. For very young children, use familiar actions such as eating an ice cream cone or raking leaves. Older children might enjoy more complex miming reflecting the senses, thoughts, or feelings.

Provide an assortment of old clothes, accessories, and other props for your child to play "dress up" and act our various roles. Also, keep assorted fabrics and ribbons of different colors and textures for your child to use with dance.

A radio or tape recorder your child can use independently may provide music. Use an assortment of music types to broaden your child's listening experience (nursery rhymes, children's songs, marches, tangos, jazz, popular, classical, religious).

Puppet making is suitable for most levels of development and can be simple (stick, paper bag, or paper plate puppets) or complex (sewn puppets or marionettes).

Encourage your child's thinking by asking questions and helping to seek answers. Always encourage your child to ask questions. When there is no clear answer, say things such as "What do you think?" and "Where can we go to find the answer?"

When going for a walk or drive, encourage your child's observation skills by commenting on and asking about the larger environment (sky, mountains, forest, water) as well as the smaller, more intricate environment (leaves, flowers, grasses, bugs, pebbles).

Social and Emotional Development

Read and discuss books about friendships. Talk with your child about friends. Ask questions such as "What do you think a friend is?" and "What do you like about having a friend?" Other questions might include "How do you think friends act with each other?" and "What can you do to meet a new friend?"

Even if it is not done perfectly or takes a little longer, encourage your child to perform daily tasks such as getting dressed, making a simple breakfast, or setting the table. It is important for your child to feel successful in participating in family routines.

Aesthetic and Artistic Development
Social and Emotional Development
Development of Responsibility
Physical Development and Well Being
Intellectual Development

Provide opportunities for your children to make personal decisions about clothing choices, healthy snacks, family menus, story times, and other matters.

Participation in volunteer activities such as community, recreation, or hospital functions helps your child recognize the kinds of contributions that can be made. Seeing themselves as helpers can contribute to children's self-confidence.

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Give positive reinforcement for your child's dreams and goals, regardless of how impossible they might seem. Say, for example, "Those are fascinating ideas. I can see you thought this out yourself."

Help your child create a "me" poster or collage using drawings, photographs, and magazine pictures. Help your child decide where to display the poster and comment on your child's special qualities.

Children may enjoy writing to a pen pal from another country as a way of developing a new friendship.

Your child also may enjoy some form of organized activity that provides opportunities to meet others. Ask your child to talk about personal preferences and then support your child's decisions about such activities as dancing, art or music lessons, organized sports, and boys' or girls' clubs. Discuss how these decisions will affect your child, you, and other family members in terms of time for friends and hobbies, providing rides, changing meal times, and any other pertinent points. Provide gentle guidance in terms of what you already know about your child's regular activities.

Sharing special times is crucial in the development of your child's self-image. Being hugged and held by a parent, settling in comfortably with a favorite story, walking to the park, working together to complete a task, and sharing thoughts and feelings are all important activities which contribute to your child's development.

Set reasonable limits and maintain stable routines your child can anticipate. For example, meal times, family commitments, reading stories, television viewing, and bed times.

It is not always easy to maintain a positive approach or to avoid focusing attention on non-productive behavior. However, with an informed and honest approach, you are showing your child how to deal effectively with issues or problems as they arise. For example, "Paul is playing with the shovel now. Let's see what else you can find to play with until it's your turn." Communicate with your child about the behavior you expect. For example, "Let's paint on the newspapers so there won't be spills on the floor."

Intellectual Development

When you read to your child on a regular basis, you also model that reading is important in your life. If you build up and maintain a home "library" that contains books of interest to all family members, your child will have access to a wide variety of reading materials. You also might want to visit the public library on a regular basis. Young children like books with large print and many illustrations, and often like to hear stories again and again. It is important to read to your children from books you yourself consider to be important. Continue reading to your children once they learn to read independently!

Aesthetic and Artistic Development
Social and Emotional Development
Development of Responsibility
Physical Development and Well Being
Intellectual Development

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During regular family activities, provide opportunities for your child to organize, classify, and use easily remembered information. For example, when unpacking groceries, ask your child to put all the fruits, canned goods, and frozen items together. When doing the laundry, ask your child to help sort clothing into whites and colors, work and play clothes, or into other interesting categories. You can also suggest sorting kitchen cutlery, school supplies, coins, tools, shoes, and other objects.

If possible, provide a plain calendar with large squares to write messages. Discuss special days and record comments to help your child remember appointments, special events, and other important dates and activities.

Make sure your child's day is not planned out entirely. Free play is important. Provide time, space, and materials for your child to create personal projects.

Help your child become aware of what he or she is doing through language by putting words to actions. For example, talk through the process of tying shoelaces. Use appropriate language, but play word games such as rhyming and synonyms. Playing with language is not "baby talk." This is how children learn.

Provide opportunities for your child to gain a variety of experiences. The more experiences they have, the more personal knowledge they gain. "Memorized" knowledge may be soon forgotten, but outings such as walks, car trips, special family events, sporting events, camping trips, picnics and visits to the beach, library, museum and fair all provide experiences that enable children to make connections and see how ideas and events relate to one another.

Provide encouragement for activities, for when your child says, "Let me try!" or "Can I do that?" Always ensure your child's health and safety first.

Encourage your child to talk about personal experiences by asking questions such as: "What do you like about this?" "What did you not like about this?" "Would you recommend this to a friend?" "What do you think would happen if…?"

Physical Development and Well-Being

Encourage your child to attempt new and interesting activities. Provide encouragement and support, but if the activity poses a real safety hazard, explain this to your child.

Play games or sing songs that help your child to identify body parts (head, shoulders, knees, and toes).

Expect your child to move from one activity to another. It is normal for children to find it difficult to sit still or to stay with one activity.

Aesthetic and Artistic Development
Social and Emotional Development
Development of Responsibility
Physical Development and Well Being
Intellectual Development

If you become involved in games with your child and your child's friends, avoid elimination games where someone is "out." Suggest games that include all players and do not focus on scores and winning.

Children like to have life-size outlines of their bodies traced on paper. Encourage and help your child to draw eyes, nose, mouth, clothing, and to locate and name body parts.

Ask your child to share ideas about safety rules when playing a game or using equipment.

Your child may enjoy being part of a team or group. Encourage a team or group activity that helps your child remain active into adolescence. If you are involved in organized team sports, model the kind of behavior you would like your child to exhibit.

Provide access to different kinds of music during playtime. This can add enthusiasm to your child's movements or soothe or relax after strenuous play.

If possible, make an at-home obstacle course with your child to provide opportunities for crawling, jumping, running, and hopping.

Maintaining a balance between free exploration and excessive risk taking is not easy. When experimenting with a new activity such as learning to ride a bike, try not to over-use phrases such as, "Be careful!" or "You might get hurt!" Do provide background for the activity in terms of the safety rules and how to use equipment.

Demonstrate and discuss your ideas about safety procedures in everyday life (crossing the street).

Demonstrate and discuss your ideas about nutrition (eating a balanced meal).

Development of Responsibility

When arguments occur between your children or their friends, help them become their own problem-solvers. Ask questions such as, "What do you think the problem is?" or "What are some ways you can think of to solve this?"

Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

Share newspaper and magazine articles with your child. Find articles that tell of events affecting children and families in other places. Follow what happens. Ask questions such as: "How do you think they feel?" "What would you do if you were in this situation?" "Do you think they need some help?" "Who could provide that kind of help?" "Is there something we can do about this?"

Your child may enjoy participating with you in a community group.

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Keep a family photo album for your child and you to look at and talk about. Talk about your child's heritage. Attend cultural and ethnic celebrations and festivals to introduce your child to the heritage of others. Talk about the similarities and differences.

Your child may enjoy writing to a pen pal from another country as a way of developing a new friendship and knowledge of another culture.

Encourage family members to show appreciation for one another by extending courtesies such as sending notes. Very young children can dictate the notes which then can be placed in lunches, on the refrigerator, or passed out at supper-time.

Talk about how stress can lead to conflict. Discuss ways in which your child can handle conflicts, problems, fights, and arguments.

Take your children on nature walks. Encourage them to use their senses (seeing, listening, smelling, touching, and tasting, if appropriate).

Encourage your child and your family to examine your own practices that affect the world around you.

Talk to your child about what to do in emergency situations. Rehearse these situations from losing mittens to calling the police.

Talk about how each family member contributes to the well-being of others in the family, in the community, and in other groupings.

The consequences of family decisions affect everyone. Give your child opportunities to make choices.

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Considerations for Implementation

Like growing flowers, where certain specific conditions are provided to produce beautiful blossoms...adults provide the conditions that establish the growing ground for empowered children.
Wasserman, *1990*

Introduction

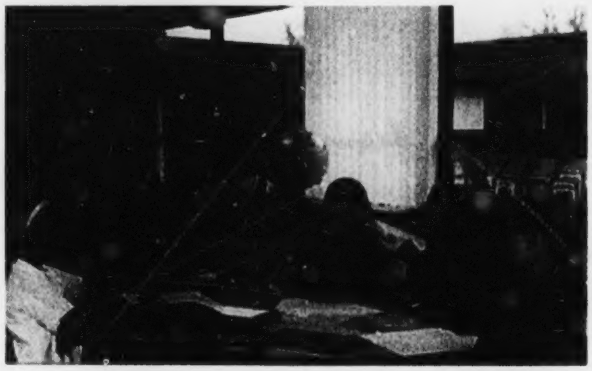
Those who implement the Primary Program consider the principles that support the primary program philosophy. Fundamental characteristics of an enabling environment appropriate for young children and key aspects of curriculum, assessment, and evaluation must be identified. The roles of educators and parents in creating an optimum learning environment for children are all important considerations.

The Child and the Learning Environment

Children are unique individuals. They develop and learn at different rates and in different ways. The learning environment helps develop individual potential. It respects and values differences in children, building upon individual differences rather than stressing conformity. It provides opportunities for continuous learning while allowing that learning occurs in different areas, at different times, and in different ways. It accommodates children with diverse abilities and backgrounds to participate equally. Children are assessed and evaluated in terms of their achievements, not by comparisons to group norms. Children are encouraged to improve their performance and to realize their potential rather than to compete with others.

Active learning classrooms, based on principles of child development, produce long term gains in general intellectual growth, social and emotional skills, and life coping abilities.

Peck, McCaig, & Sapp, 1988



Children are aesthetic and artistic beings. They learn through sensory experiences; they express and represent thoughts and feelings through a variety of media and forms.

The learning environment provides the time and the opportunities for children to experience and respond to their world through their senses. It allows children to create and to express themselves in a variety of ways.

Children are emotional and social beings with unique personalities. They learn best when they feel secure and valued. When they are accepted and appreciated, they are free to take risks, to make mistakes, and to learn from their errors and successes. Children develop and refine their thinking as they interact and communicate with other children and adults.

The learning environment is social in nature, providing a psychologically safe, secure and stimulating climate for all children. It provides time and opportunities for children to take appropriate risks, make choices, and explore and investigate their world. It offers children experiences which encourage them to interact with others, to develop interpersonal skills, and to work and learn cooperatively and collaboratively.

Children are intellectual beings. They are curious and enthusiastic learners who want to know about the world around them. As children experience their world directly, they experiment, make discoveries, and form hypotheses. They use language to clarify and extend their thinking and to communicate with others. Intellectual development is a process of acquiring, structuring, and restructuring knowledge. This intellectual development encompasses the dispositions, skills, and knowledge described in the humanities, sciences, practical arts, and fine arts curricula.

The learning environment is experience rich, providing time and opportunities for first-hand experiences. It allows for the development of thinking processes through engaging children in activities that stem from their natural curiosity and wonder. Children are invited to explore and represent their thinking in a variety of forms. The environment is rich with language and literacy experiences, providing time and opportunities for children to communicate with other children and adults, to be immersed in oral and written language, and to become literate in purposeful, meaningful ways.

Children are physical beings who, to varying degrees, are physically active and energetic. For children, learning involves whole-body activities, active participation, and play. They need experiences that extend their ability to lead safe, active, and healthy lives.

The learning environment provides time, space, and opportunities for movement, for manipulation of objects, and for acquiring attitudes, dispositions, skills, and knowledge for safe and healthful living.

Children are becoming socially responsible, caring beings. They have unique cultural experiences and are developing interest in learning about their immediate and expanded environments.

The learning environment fosters an accepting, tolerant, and flexible attitude toward others and a respect for the natural world. It provides time and opportunities for children to participate in a variety of multi-cultural, nonsexist, and environmentally sensitive activities. It helps children move beyond the personal level toward an awareness and appreciation of social, ethical, and environmental issues leading to positive action.

Children construct knowledge. Learning is an ongoing experience where children continually act upon and organize their experiences as they try to make sense of their world. As they interact with information and experiences, they move through the cycle of human learning common to all (see the following Model of Learning and Teaching). This cycle involves movement from *awareness* (exposure to and notice of events, concepts, people, and objects), to *exploration* (figuring out or bringing personal meaning to events, concepts, people, and objects), to *inquiry* (developing understanding of events, concepts, people, and objects), to *utilization* (applying or transferring what has been learned about events, concepts, people, and objects).

The learning environment provides opportunities and support in each level of the learning cycles to foster individual growth and development. Opportunities to revisit experiences and information facilitate a child's movement through the learning cycle as each interaction strengthens current knowledge and challenges the child to move to the next level.

Children may have challenging behaviors. Some children need more individualized support than others in order to learn. It is only fair to give them the chance even though it is easy to confuse being fair with being consistent. Every child has different needs, and every child deserves the treatment that is appropriate for her, which means you respond in one way to one child and in another way to another child (Kaiser & Rasminsky, 1999).

In 1999, the Division for Early Childhood of the Council for Exceptional Children adopted a concept paper on the identification of and intervention with challenging behaviors of children. The introduction of the concept paper begins with these thoughts:

> "Many young children, including children with disabilities, engage in behavior that is labeled by adults as "challenging." Sometimes, this behavior is short-term and decreases with age and use of appropriate guidance strategies. Additionally, what is "challenging" to one person may not be to another. It is critical for professionals to be aware of and sensitive to how families, cultural groups, and communities define appropriate and inappropriate behavior in young children. Different communities have varying expectations for child behavior. Professionals must respect family, cultural, and community expectations in identifying problems and designing interventions. However, sometimes families or professionals may have inappropriate expectations for young children's behavior. It is important to understand what behaviors are typically associated with particular age groups. For instance, adults need to understand that young children engage in behaviors that older children do not, such as throwing toys or sitting for only short periods of time. With guidance and instruction most children will learn appropriate alternative behavior. Adults must also explore their own beliefs and emotions about certain behaviors (e.g., cursing or hurting others) in order to respond objectively to children. in summary, care must be taken to consider cultural and community beliefs, developmentally appropriate expectations and one's own beliefs about behavior, in the identification of children's behavior as "challenging."
>
> (Division for Early Childhood of the Council for Exceptional Children, 1999)

Model of Learning and Teaching

What Children Do...	*What Teachers Do...*
AWARENESS ▪ Experience ▪ Acquire an interest ▪ Recognize broad parameters ▪ Attend ▪ Perceive	▪ Create the environment ▪ Provide opportunities by introducing new objects, events, and people ▪ Invite interest by posing problem or question ▪ Respond to child's interest or shared experience
EXPLORATION ▪ Observe ▪ Explore materials ▪ Collect information ▪ Discover ▪ Create ▪ Figure out components ▪ Construct own understanding ▪ Apply own rules ▪ Create personal meaning	▪ Facilitate ▪ Support and enhance exploration ▪ Provide opportunities for active exploration ▪ Extend play ▪ Describe child's activity ▪ Ask open-ended questions, "What else could you do?" ▪ Respect child's thinking and rule systems ▪ Allow for constructive error
INQUIRY ▪ Examine ▪ Investigate ▪ Propose explanations ▪ Focus ▪ Compare own thinking with that of others ▪ Generalize ▪ Relate to prior learning ▪ Adjust to conventional rule systems	▪ Help children refine understanding ▪ Guide children, focus attention ▪ Ask more focused questions, "What else works like this?" "What happens if...?" ▪ Provide information when requested, "How do you spell...?" ▪ Help children make connections
UTILIZATION ▪ Use the learning in many ways; learning becomes functional ▪ Represent learning in various ways ▪ Apply to new situations ▪ Formulate new hypotheses and repeat cycle	▪ Create vehicles for application in real world ▪ Help children apply to new situations ▪ Provide meaningful situations to use learning

From: NAEYC & NAECS/SDE, 1991

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Families and the Learning Environment

Parents and families are children's first and most important role models.
They do their best to provide a nurturing environment that supports children socially and emotionally. Families prepare children for school by building positive home conditions which support learning and appropriate behavior. Families follow the progress of children throughout each school year and during non-school hours. Families project their philosophies, attitudes, and ideas concerning education to their children. Parents and families have needs that change over time.

Parents and families are active partners in the education of their children.
Parents and families provide daily opportunities for learning at home and support learning at school. Families spend time together, conversing, sharing ideas, and reading aloud to one another. They share with and support one another through life experiences. Families engage in open, two-way communication with the school concerning all aspects of their children's educational program. Schools respect the knowledge of parents concerning their children.

Parents and families are active learners.
Parents and families model learning strategies by using information resources. They model and encourage enthusiasm for learning by sharing and seeking information with their children. The home environment supports the conditions necessary for children's learning.

Parents, families, and schools support each other.
Families attend school-sponsored activities such as plays, concerts, sports events, and assemblies when possible. Families help to share and abide by school rules and regulations. Families support school organizations. Schools build upon the strength of families.

Parents and families are offered an active role in the life of the classroom.
Family members have an opportunity to volunteer at school. They may be asked to assist on a regular basis in the classroom, lunch room, office, or media center. Family members may wish to assist with class projects, field trips, or other events. Families are considered as sources of information and support when planning projects and theme studies. The level of participation is determined by the family and is welcomed by the school.

Parents and families are advisors and decision-makers.
Parents and families are welcomed as active members of advisory groups which recommend policies and procedures for the school. They are asked to serve as advisors in curriculum decisions and in the selection of materials.

Families and schools are advocates for each other.
The family encourages positive support for the school within the community. The school encourages positive support for the family within the school and community. Families and schools communicate often and work together to do what is best for children.

The Teacher and the Learning Environment

The role of the teacher is to facilitate learning. The teacher guides learning experiences through strategies that encourage children to think creatively, problem-solve, make decisions, and expand their thinking skills.

The teacher:

The job of a teacher is to excite in the young a boundless sense of curiosity about life, so that the growing child shall come to comprehend it with an excitement tempered by awe and wonder.

Quoted by Garrett in Peter, 1977

- Relates to all children with warmth, sensitivity, and caring to establish and sustain a climate in which learning is joyful
- Invites children to participate in planning and creating a rich, stimulating environment which encourages interaction, exploration, and investigation
- Provides encouragement, support, and challenge, as appropriate, to help children develop personal goals
- Models respect for others and the environment
- Collaborates with other professionals and the children to plan, create, and sustain a safe climate in which children may work harmoniously, creatively, and productively
- Draws upon a variety of organizational patterns to make optimal use of space and to integrate a variety of materials and equipment that stimulate active learning
- Provides time, opportunity, and a range of different experiences to stimulate children to interact, reflect, communicate, and learn
- Structures opportunities for children to work individually and with other children; with their teacher and other adults; and in groups of different sizes and composition formed for different purposes
- Focuses on the ongoing learning of individual children and on developmentally appropriate assessment and evaluation
- Draws upon a range of instructional strategies from coaching to direct instruction to maximize children's learnings

- Uses the information gained through assessment and evaluation to make thoughtful, informed, and tactful interventions as required
- Exchanges information about the child with the child and parents on an ongoing basis
- Models and demonstrates enthusiasm and a disposition for learning, and helps children to enjoy learning as meaningful, relevant, and personally satisfying

What is the Teacher?

What is the teacher?
A guide, not a guard.
What is learning?
A journey, not a destination.
What is discovery?
Questioning the answers, not answering the questions.
What is the process?
Discovering ideas not covering content.
What is the goal?
Open minds, not closed issues.
What is the test?
Being and becoming, not remembering and reviewing.
What is the school?
Whatever we choose to make it.

Glatthorn, British Columbia Ministry of Education, 1990

The Administrative Team and the Learning Environment

The role of the administrative team is to lead the learning process. The team provides the necessary conditions for the implementation of the primary program. These include but are not limited to time, resources, and support for a collaborative environment where those involved study the issues, visit other programs, and practice new strategies.

The paramount task of the district administrator is not to get this or that innovation put into practice, but to build the capacity of the district and the schools to handle any and all innovations.

Fullan, 1991

The administrative team must lead a process that:

- Articulates the vision and direction of the district with regard to teaching and learning practices
- Analyzes the potential of the primary program to meet an identified need

- Clarifies, supports, and insists on the administrative role as central to building the capacity to implement the Primary Program
- Ensures that support is provided in the form of quality materials, inservice training, technical assistance, and opportunities for teacher interaction and planning
- Allows for modification and adaptation of the Primary Program out of respect for individual needs
- Communicates with and maintains the support of parents, community, and the school board for the Primary Program
- Sets up an assessment system to monitor and adjust if issues arise or problems occur

The Curriculum and the Learning Environment

The curriculum fosters the development of the child and promotes learning. It provides a variety of activities and materials that increase in difficulty and complexity as the child develops skills, knowledge, attitudes, and dispositions.

The curriculum:

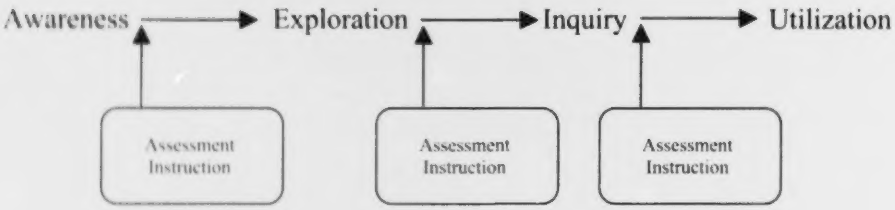
- Begins from where the child is and builds on the child's interests and natural sense of wonder
- Is worth learning, meaningful, and engaging; is appropriate to the child's particular stage of development
- Engages the child in meaningful activities and experiences which provide a context for the development of thinking processes
- Builds on, extends, and enhances success
- Provides a balance of activities and experiences that reflect the five goal areas
- Develops the attitudes, dispositions, skills, and knowledge of the fine arts, humanities, practical arts, and sciences
- Allows for the inclusion of locally developed programs and is appropriately responsive to state and national standards
- Includes a broad-based educational focus in which social, ethical, and environmental issues are presented
- Is integrated wherever and whenever possible
- Invites children to cooperate and collaborate with others

Assessment and Evaluation and the Learning Environment

Assessment and evaluation foster the development of the child and promote learning. Both components are an integral part of the ongoing teaching-learning process but should not dominate or fragment learning.

Assessment and evaluation:
- Involve each child in self-reflection and evaluation
- Focus on each child individually
- Identify and build upon what each child can do
- Identify a child's interests and learning needs to facilitate continuous learning
- Are based on authentic evidence and appropriate practices and materials
- Include and arrange a variety of strategies and resources to suit the child and the purpose of the learning activity
- Are based on the curriculum and help direct the planning of learning experiences
- Acknowledge the whole child by focusing in a balanced way on all five of the primary program goal areas
- Enable learners
- Aid teachers in their ability to help each child grow and develop
- Link home and school in a partnership

Assessment as it relates to the "Model of Teaching and Learning"



Kindred Spirits

Learning is about relationships.
Most of which are formed while we make discoveries.
And no one celebrates discoveries quite like those who know the child within,
and in others visualize the possibilities with which
we all began.

This vision makes us Kindred Spirits.
The kind of spirits who find high rewards in hugs;
put dandelions in water; sing happy birthday many times a year;
uses compassion with dead goldfish; take 20 children to the zoo
and return with the same number; speed-tie tennis shoes
and black-patent-leather buckles; really celebrate
February 14th; guard family secrets and overheard conversations;
accept innocent rudeness; recycle everything and
believe in serendipity.

These Kindred Spirits have liberty daily, to laugh and cry,
sit on the floor, paint and swing, hold hands and
look into faces that reflect life.

Sometimes, the power of the job is frightening.
Sometimes, the trust bestowed upon us, to care for
Humanity's child sinks in.
Then we pause to watch even more closely,
knowing that the future of this planet sits
precariously in the laps and arms
of Kindred Spirits all around this earth;
with gentle beings who love learning and children,
and live with a passion for something, everyday.

What do these spirits manifest for the future?
Compassion, joy, respect,
curiosity, love,
honesty, creativity and
appreciation of life
through someone else's eyes.

Most people will never know
what we know,
about the hand-holding, the dandelions and sweaty hugs.

It is their loss.
And, it is what makes us Kindred Spirits.

Susan R. Andersen, 1993

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Cultural Diversity in Learning and Learners

Common Understandings

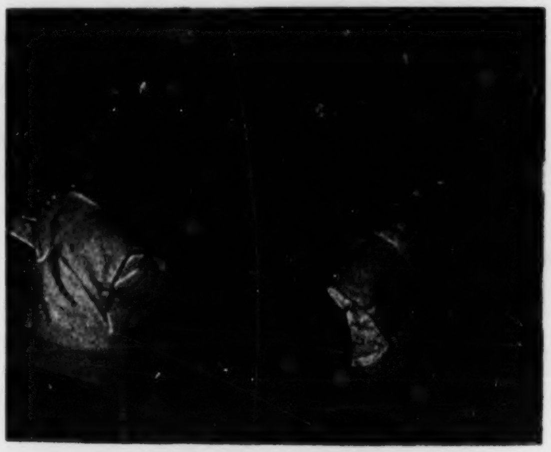
Multicultural education recognizes that all children enrich the culture of the classroom through the diversity of their many origins, beliefs, values, and first languages. As such, the primary program affirms the cultural pluralism which is the essence of American society.

Children have stories, songs, dances, art traditions, celebrations, beliefs, and values that are unique to their culture and experience. The teacher makes use of opportunities to integrate this rich cultural diversity into the curriculum and weave it into the fabric of everyday school life to achieve the goals of empathy, respect, and understanding that characterize cultural pluralism. Children and teachers explore ways to find common understandings and similarities among cultures and ways to celebrate differences between cultures. In this way, all children are invited into the culture and the curriculum of the school. An education which sustains and teaches to these ideals and values is a multicultural education.

Multiculturalism is a layered concept that includes not only the experiences of particular individuals and groups but also their shared interests and relationships, which in turn are embedded into the interconnectedness of all peoples of the world.

Pugh & Garcia, 1992

A sound multicultural education model manifests an acceptance of and respect for all cultures in our pluralistic society. It fosters positive self-regard in one's own culture and positive attitudes toward the culture of others. While exploring similarities and differences among cultures, it develops an understanding and appreciation of one's own cultural heritage as well as that of other cultures. It fosters the ability to function harmoniously and productively in a multicultural society.



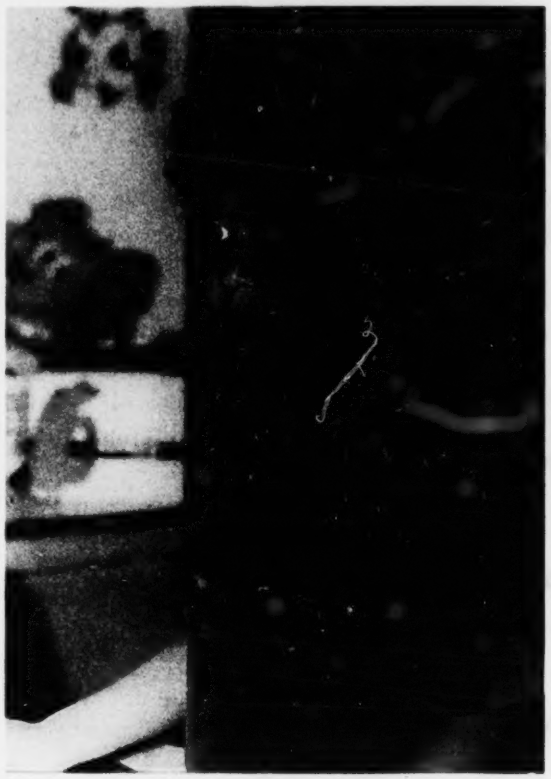
The principles of multicultural education promote close working relationships among the school, home, and community in order to provide consistent expectations and mutual support. The use of positive role models from the community is an integral and valuable component for promoting multicultural education in the schools. It is important to note the diversity of cultures, ethnic backgrounds, and races of children in schools. The growing diversity of our nation's educational community provides educators with opportunities and challenges to provide an enabling environment and appropriate educational experiences.

The process of planning and implementing an appropriate educational program must include considerations of the child's identity, learning style, and needs as well as family priorities and concerns. Teachers and support staff will find it challenging to implement assessment procedures and instructional practices that accommodate the diversity of children in their program.

It is the responsibility of the teacher and the educational team supporting the classroom to offer a learning environment that respects and is sensitive to the experiences, values, and attributes of a child representing any cultural, racial, or ethnic group. It is the role of the team to recognize the child's strengths and be aware of any unique needs that may develop.

In some situations, a child may need accommodations in the learning environment and additional support to be successful in school. A student assistance team may be a valuable resource to access information, assess strengths and needs, and to design accommodations to assist the child and provide support to the teacher.

The building team may need suggestions and resources that are specific to the child and the unique needs of his or her racial or ethnic group. Resources and contacts available to the school district or family are listed at the end of this section.



Planning for a Multicultural Curriculum

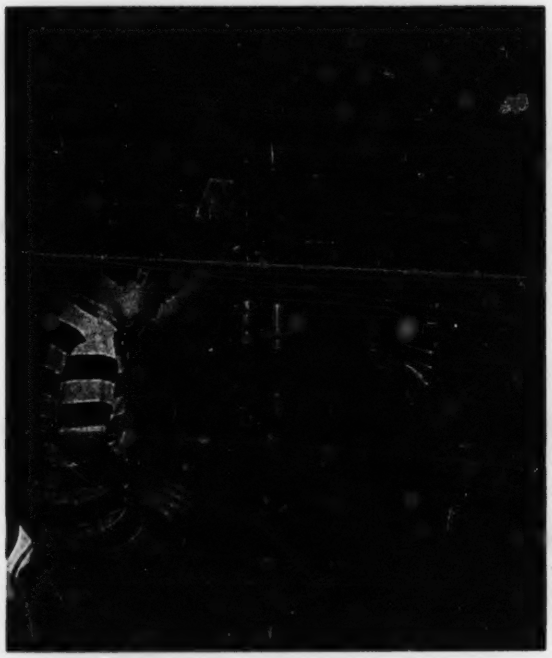
Daily curriculum emerges from three sources:

- Children's behavior
- Teachers' awareness of children's developmental needs and learning styles
- Societal events (Derman-Sparks, 1992)

Activities within the curriculum emerge from exploring physical and cultural similarities and differences in the context of the child's family life. These explorations might begin with children's questions and comments as they express curiosity.

The goals of a multicultural curriculum for young children should foster in each child:

- Construction of a confident and knowledgeable self-identity
- Empathetic interaction with diversity
- Critical thinking about bias
- Ability to stand up for one's self and for others in the face of bias.



For the curriculum to be developmentally appropriate, it must be individually and culturally appropriate to each child. Therefore, the children, their families, society, and teachers provide important sources for an anti-bias, multicultural curriculum (Bredekamp & Rosegrant, 1992). Further, learning about diversity must be integrated into all aspects of the program.

One way to identify possibilities within a particular curriculum topic is to brainstorm multicultural issues that emerge from a traditional topic such as "families" or an ongoing theme such as "our environment." The developmental expectations at the end of this section are a tool for evaluating the age appropriateness of the content. The teacher must also consider whether the content is meaningful to the particular group of children.

When planning for a multicultural curriculum:

- Form a study group; do background reading and discussion
- Involve parents and administrators in planning and developing activities
- Become involved with and supportive of families
- Make extensive use of all cultures throughout the curriculum, including methods of instruction, materials, and instructors. Curriculum materials should reflect the cultures of the learners and should be developed in concert with local communities. Materials and content which reflect all cultures need to be embedded in the curriculum and integrated across content areas. Sharing information about traditional values, using local crafts people in the classroom, and inviting the elders to share their stories and personal experiences are appropriate ways of establishing communication and honoring the local communities.
- Provide a range of instructional strategies which build on the strengths of the child
- Place a major focus on success for all children; self-esteem is developed when children experience success
- Provide learning experiences for teachers about the cultures of children in their classrooms
- Emphasize the development of good communication skills in an enriched environment through play, story telling, discussion, and role playing
- Begin by talking about differences children notice
- Reflect the cultures of children through the use of photographs, art work, language, and models of the cultures represented
- Evaluate materials for cultural biases in instruction and assessment
- Take advantage of the richness of having many cultures represented in the classroom.

In addition to meeting the educational needs of individual children with unique attributes and backgrounds, educators are also responsible for providing every child with an anti-bias, multicultural education. Children develop biases through messages they hear and see in society. An anti-bias curriculum offers goals to enable every child to construct a confident identity; to develop comfortable, empathetic and just interaction with diversity; and to develop skills for standing up for one's self in the face of injustice (Derman-Sparks, 1989).

Goals and Developmental Expectations of Anti-bias, Multicultural Curriculum for Young Children

GOAL 1: To foster each child's construction of a knowledgeable, confident self-identity.

Includes both personal and group identity, for many children a bicultural identity: fosters confidence, not superiority.

2 & 3-year-olds	4-year olds	5-year olds	6-year olds	7 & 8-year olds
▪ Are intrigued with their physical characteristics, including gender; anatomy; skin, eye color, hair color and texture; and physical ableness. ▪ See themselves as single, unique individuals; for example, 3's typically consider their name as a part of themselves and are puzzled when another child has the same name as theirs. They also consider skin color, gender, anatomy, and other characteristics as part of their individuality. ▪ Begin naming their gender identity but are not yet clear which biological or social attributes determine it. ▪ Do not yet have gender or racial constancy; they think their gender identification can change by dress or play preferences and they can change their skin color and eye color.	▪ Continue strong interest in their physical characteristics and what names describe them and begin constructing gender, race, and ethnic identity constancy. ▪ Begin to see themselves (including their ethnic group name) as part of their family, while still focused on themselves as individuals and not yet as members of larger groups. ▪ Are rapidly absorbing the rules of behavior and the language of their home culture, not from formal lessons but from their daily life experiences. In general, their "egocentrism" includes thinking their family's way of life is how everyone else lives. ▪ Are vulnerable to the influence of societal norms and socially prevailing biases. Questions related to identity may reflect not only confusion about identity constancy but also awareness of negative societal messages about themselves.	▪ Have established a rudimentary sense of gender and race identity that includes constancy. ▪ Have a heightened interest in the meaning of each component of identity in relation to other children's ideas. ▪ Experience heightened possibilities of receiving teasing or rejection from other children based on an aspect of identity. ▪ Experience heightened possibilities of absorbing socially prevailing norms or negative stereotypes about themselves.	▪ Have constructed a core sense of identity that includes their gender, race and ethnicity, physical ableness, and beginning awareness of class. ▪ Become increasingly interested in "hanging out" and identifying with classmates who are alike, e.g., girls with girls, boys with boys. ▪ Begin to identify themselves and their families as members of larger racial or ethnic groups. ▪ Can suffer serious damage both to self-esteem and to a positive sense of racial or ethnic group identity if they experience the impact of societal biases.	▪ Are constructing or have constructed the cognitive ability of "class inclusion" that makes possible children's understanding of how they can have many different aspects of identity and still be one person, and of how people who are not exactly the same as them can belong to the same ethnic group as they do. ▪ Begin to weave the various aspects of identity into a whole (I am a boy, Mexican- American, speak English and Spanish, like rap, am Catholic and middle-class). ▪ Demonstrate heightened interest in learning about their ethnic group in their community, city, and country, especially through oral stories, written autobiographies and biographies, although learning still must be concrete. ▪ Grapple with where they fit as individuals into their group identities—their gender, their ethnicity

This section is adapted from Derman-Sparks, L. (1992). "Reaching Potentials Through Antibias, Multicultural Curriculum." In Bredekamp, S. and Rosegrant, T. (Eds.). *Reaching Potentials: Appropriate Curriculum and Assessment for Young Children.* Volume I. pp. 118-121. Washington, DC: National Association for the Education of Young Children. It is reprinted with permission from the publisher.

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GOAL 2: To foster each child's comfortable, empathetic interaction with diversity among people.

Includes developing the disposition as well as the knowledge to understand and appreciate similarities and differences among people, to respectfully and effectively ask and learn about differences, and to comfortably negotiate and adapt to differences.

2 & 3-year olds	4-year olds	5-year olds	6-year olds	7 & 8-year olds
▪ Notice and ask about other children's and adult's physical characteristics, although they are still more interested in their own. ▪ Notice other children's specific cultural acts, e.g., Elena speaks differently from me; Mei eats with chopsticks; Jamal's grandpa, not his mother, brings him to school. ▪ May exhibit discomfort and fears about skin color differences and physical disabilities.	▪ Are increasingly interested in how they are alike and different from other children, construct "theories" that reflect "preoperational thinking" about what causes physical and apparent cultural differences among children and adults they know, societal stereotypes, and discomforts. ▪ Although still focused on themselves and others as individuals, begin to classify people into groups by physical characteristics (same gender, same color, same eye shape) using the general classification schemes they apply to inanimate objects (for example, lack of class inclusion). ▪ Are often confused about the meaning of adult categories for what "goes together." For example, how can a light skinned child have a dark skinned parent? Why are children called Black when their skin isn't black? Mexican people speak Spanish; if I don't speak Spanish, I'm not Mexican. Girls are supposed to have girl names so how can "Sam" be a girl? How can you be an "Indian" if you aren't wearing feathers? ▪ Begin to become aware of and interested in cultural differences as they relate to the daily lives of children and adults they know (for example, who makes up their family, who lives in their house, what languages they speak, what jobs family members do). ▪ Show influence of societal norms in their interactions with others ("Girls can't do this; boys can.") and learned discomforts with specific differences in their interactions with others ("You can't play; your skin is too dark.").	▪ Demonstrate continued interest in gender, racial, ethnic, and ability differences and similarities, as well as an awareness of additional characteristics such as socioeconomic class, age, and aging. ▪ Demonstrate heightened awareness of themselves and others as members of a family and curiosity about how families of other children and teachers live. ▪ Continue to construct theories to classify or explain differences among classmates. ▪ Continue to absorb and use stereotypes to define others, and to tease or reject other children.	▪ Have absorbed much of their family's classification systems for people, but still get confused about why specific people are put into one or another category by adults. ▪ Use prevailing biases, based on aspects of identity, against other children. ▪ Are beginning to understand that others also have an ethnic identity and various life-styles as they understand their own emerging group identity.	▪ Demonstrate heightened curiosity about other people's life-styles, religion, and traditions, including people with whom they do not have direct contact. ▪ Can begin to appreciate the deeper structural aspects of a culture, e.g., beliefs about human's relationships to the land and the impact of different historical environments on people's lives. ▪ Understand, through new cognitive tools, that there are different ways to meet common human needs. ▪ Can begin to appreciate the past if history is presented concretely through stories about real people. ▪ May experience heightened in-group solidarity and conflict between children based on gender, race, ethnic identity, and socioeconomic class, and exclusion of children with disabilities because of interest in their own groups and because of the impact of societal biases on them.

GOAL 3: To foster each child's critical thinking about bias.

Thinking seriously about bias means developing the cognitive skills to identify unfair and untrue images (stereotypes), comments (teasing, name calling,) and behaviors (discrimination) directed at one's own and another's identity—whether gender, race, ethnicity, disability, class, age, weight, or other characteristics—and the emotional empathy to know that bias hurts.

2 & 3-year-olds	4-year olds	5-year olds	6-year olds	7 & 8-year olds
▪ Are learning to be comfortable with various differences through repeated supportive experience. These experiences lay a foundation for later understanding of "fair"/"unfair" images and behaviors.	▪ Can begin to use concrete experiences and verbal feedback from adults to explore the reality of their "theories" or misconceptions about human differences. ▪ Can begin to develop the foundation for critical thinking by comparing a fair and an unfair image. ▪ Can begin to learn to distinguish between a person's action that is not positive and a person's identity. ▪ Can accept the limits of not teasing a person because of who they are and develop emotional understanding (empathy) that teasing or rejection because of identity hurts, just as hitting does.	▪ Can begin to think critically about stereotypes, comparing reality to stereotyped images and determining what is fair or unfair. ▪ Can begin engaging in critical thinking about unfair or hurtful behaviors (name calling, teasing) in specific, real situations. ▪ Can begin problem-solving, caring about ways to respond to differences. ▪ Can begin engaging in critical thinking about specific societal norms, but only on an individual basis. For example, "Some people say that a person who uses a wheelchair can't be a teacher, but I know Martha is a teacher."	▪ Can also begin to engage in comparisons about correct and incorrect beliefs about various groups (not just individuals) by gathering and using concrete data relevant to them (for example, "Some people say men can't be nurses or take care of children, but we have gathered evidence that says otherwise." "Girls can't do science, but we have learned..." "People with visual impairments can't work, but we have learned...").	▪ Have the cognitive tools to think about their own ideas and begin to understand about the influence of socially prevailing stereotypes on them, although they have absorbed and internalized many stereotypes and prejudices. ▪ Can use emerging reading and writing skills to gather data that challenges stereotypes and erroneous ideas about people based on gender, race, ethnicity, disabilities, class, or other characteristics.

Goal 4: To foster each child's ability to stand up for herself or himself and for others in the face of bias.

Confronting bias means helping each child learn and practice a variety of ways to speak up when: (1) another child acts in a biased manner toward her or him, (2) a child acts in a biased manner toward another child, and (3) an adult acts in a biased manner. Goal 4 builds upon Goal 3: critical thinking and empathy are necessary components of acting for one's self or for others in the face of bias.

2 & 3-year olds	4-year olds	5-year olds	6, 7, & 8-year olds
▪ Are learning acceptable ways to express their feelings when they want something or when others hurt them.	▪ Engage in simple problem-solving and conflict-resolution techniques for dealing with incidents of teasing or rejection directed at their own and others' identities.	▪ Problem-solve and use ways to handle specific unfair comments and behaviors that arise in their school or home lives. ▪ Gain emotional food for thought from stories about adults who have worked for social justice, especially adults they know. ▪ With adult help, create and engage in simple group actions based on a concrete, meaningful experience in their daily lives, for example, working to get a handicapped parking space at their center or school.	▪ Develop fair classroom behavior rules for identity issues with greater understanding, more autonomy, and more depth. ▪ Identify respectful ways to ask about cultural behaviors and ideas different from their own. ▪ Learn about people who work for social justice in their communities. ▪ Problem-solve conflict situations involving bias. ▪ Problem-solve specific group actions related to a concrete discriminatory situation in their school or immediate community.

Multicultural Classroom Environment Checklist

This checklist is designed to help teachers determine if the classroom environment and activities reflect multicultural perspectives. By using the checklist, the teacher will focus on individual aspects of the classroom environment and curriculum, highlighting areas of curriculum that need improvement. Teachers are encouraged to rate the classroom environment as it is and work on changes which make the classroom the way they would like it to be.

1. Does the classroom have a wide variety of age-appropriate and culturally diverse books and language arts materials?

   Yes ____ *No* _____

2. Are there stories about people from each of these cultural groups in the classroom library?

   _____ Native American
   _____ Spanish-speaking
   _____ Asian-American
   _____ African-American
   _____ Caucasian Ethic Groups
   _____ Middle Eastern Ethnic Groups
   _____ Asian Ethnic Groups
   _____ African Ethnic Groups

3. Do the characters in the classroom books have personalities like real people?

   Yes ____ *No* _____

4. Are there stories about the contemporary life of a given ethnic group as well as tales and legends?

   Yes ____ *No* _____

5. Are there pictures of people displayed in the classroom representative of a multicultural community?

   Yes ____ *No* _____

6. Do materials and games present people in non-stereotypic ways? For example, are there examples of women in science and math careers: men in nurturing roles; Native Americans in the 90's? List examples from your classroom.

   Yes ____ *No* _____

7. Do the people in the block accessories go beyond stereotypic roles? List some examples.

Yes ____ *No* _____

8. Is there a wide variety of clothing, including traditional and modern garments from a variety of culture groups, in the dramatic play area?

Yes ____ *No* _____

9. Are the dolls in the dramatic play area of both genders?

Yes ____ *No* _____

10. Do the dolls represent a variety of races in realistic ways?

Yes ____ *No* _____

11. Do the music experiences in the curriculum reinforce children's affirmation of cultural diversity?

Yes ____ *No* _____

12. Are finger plays, games, and songs from various cultural groups used in the classroom?

Yes ____ *No* _____

13. Do the cooking experiences in the classroom encourage children to experiment with foods other than those with which they are familiar?

Yes ____ *No* _____

14. Are the cooking experiences designed to give young children a general notion of the connections between cultural heritage and the process of preparing, cooking, and eating food? If so, how?

Yes ____ *No* _____

(Adapted from Kendall, 1983)

School-wide Diversity Checklist: Do you ...?

- Provide activities that require children to combine their energies to reach a common goal, such as group mosaics or construction projects?

  Yes ___ *No* ___

- Use group projects to reinforce the idea that working together is fun and productive?

  Yes ___ *No* ___

- Encourage children to practice taking another person's point of view?

  Yes ___ *No* ___

- Provide children with first-hand experiences which reflect a variety of races, cultures, and ethnic groups, for example, going to a museum in an urban center or dramatizing stories from various cultural origins?

  Yes ___ *No* ___

- Invite community members to share special skills related to their culture?

  Yes ___ *No* ___

- Have a wide variety of materials in the classroom which represent many backgrounds and cultures? (See Multicultural Classroom Environment list.)

  Yes ___ *No* ___

- Use songs and games from various cultures:

  Yes ___ *No* ___

- Send general messages that there are many ways to do similar tasks and sometimes these ways are influenced by where we come from?

  Yes ___ *No* ___

- Talk to parents about multicultural education?

  Yes ___ *No* ___

- Incorporate multiple perspectives when discussing events or investigating new topics?

  Yes ___ *No* ___

- Engage in activities which demonstrate both cultural diversity and human similarities? For example, we all use language even though there are many languages. (Learn some phrases in several languages.)

  Yes ___ *No* ___

- Take walks in the community and talk about the many roles and services people provide?

  Yes ___ *No* ___

- Talk about how we need all of the people to make the community work?

  Yes ___ *No* ___

- Demonstrate interdependence through engaging children in activities which require individual contributions to a whole?

  Yes ___ *No* ___

- Encourage the equitable distribution of leadership opportunities and positions within the school?

  Yes ___ *No* ___

- Work to have all cultures represented in the school system?

  Yes ___ *No* ___

- Support networks for antiracism within the school?

  Yes ___ *No* ___

- Serve on personnel committees that hire staff?

  Yes ___ *No* ___

- Advocate for quality child care for all children?

  Yes ___ *No* ___

- Work with organizations to increase local, state, and federal resources for immunization programs, child care programs, and other social services?

  Yes ___ *No* ___

- Seek resources from which to obtain multicultural materials as well as information about specific cultures or about groups doing antiracism work?

  Yes ___ *No* ___

Checklist for Racism in Children's Literature

YES	NO	
☐	☐	Are illustrations true to the people depicted, or are they caricatures or stereotypes?
☐	☐	Do illustration of regional minorities present accurate representations of living conditions and dress styles?
☐	☐	Are people of color shown in a variety of lifestyles?
☐	☐	Does the material emphasize that every culture has its achievers, thinkers, writers, artists, scientists, builders, and political leaders?
☐	☐	Do the materials describe the achievements of all people in a similar fashion?
☐	☐	Does the story focus on problems and issues that provide insight into the experience of racial and ethnic groups?
☐	☐	Does the story focus on interactions among racial or minority groups and the dominant culture?
☐	☐	Does it portray the minority culture as "problem oriented?"
☐	☐	Is prejudice treated as a given without explanation?
☐	☐	Are persons of color shown engaged in problem-solving activities in all professional areas in business, community and world affairs?
☐	☐	Are persons of color central characters in the story?
☐	☐	Are dialects considered integral to the story as part of our rich cultural heritage?
☐	☐	Does the narrative convey a theme that is realistic, believable and not patronizing?
☐	☐	Is bilingualism considered an asset to the characters?
☐	☐	Are both female and male members of minority groups depicted in situations which exhibit them as worthy models to emulate?
☐	☐	Does the material help children to recognize both the basic similarities among all people as well as the uniqueness of the individual?
☐	☐	Do minority faces show individuality and not all look alike?
☐	☐	Do whites in the story have power and make decisions while non-whites function in subservient roles?
☐	☐	Are achievements of minority women and girls shown?

Adapted from: Arnow, J. (1995). *Teaching peace: How to raise children to live in harmony.* Berkley Publishing Group.

Checklist for Sexism in Children's Literature

YES	NO	
☐	☐	Are girls rewarded for skills and competence rather than beauty?
☐	☐	Is a realistic proportion of mothers shown at work outside the home?
☐	☐	Are some of the jobs other than administrative or technical jobs?
☐	☐	Are fathers shown raising or spending time with children?
☐	☐	Do all members of the family participate equitably in household chores?
☐	☐	Do girls and boys participate equitably in physical activities?
☐	☐	Do girls and boys participate equitably in intellectual activities?
☐	☐	Do male and female characters respect each other as equals?
☐	☐	Are both girls and boys shown to be self-reliant, clever and brave—capable of facing their own problems and finding their own solutions?
☐	☐	Are there any derogatory sex stereotyped characterizations, such as "Boys make the best architects," or "Girls are silly?"
☐	☐	Are both girls and boys shown as having a wide range of sensibilities, feelings, and responses?
☐	☐	Are male nouns and pronouns (for example mankind, he) used to refer to all people?
☐	☐	Are girls' accomplishments, not their clothing or features, emphasized?
☐	☐	Are non-human characters and their relationships personified in sex stereotypes (for example, depicting dogs as masculine, cats as feminine)?
☐	☐	Are the women and girls portrayed as docile and passive and in need of help?
☐	☐	Does the material reflect the conditions and contributions of women in today's society?
☐	☐	Are women in cultures other than the dominant one depicted accurately?
☐	☐	Are traits such as strength, compassion, initiative, warmth, courage treated as human rather than gender-specific?
☐	☐	Does the material encourage both girls and boys to see themselves as human beings with an equal right to all benefits and choices?

Adapted from: Arnow, J. (1995). *Teaching peace: How to raise children to live in harmony.* Berkley Publishing Group.

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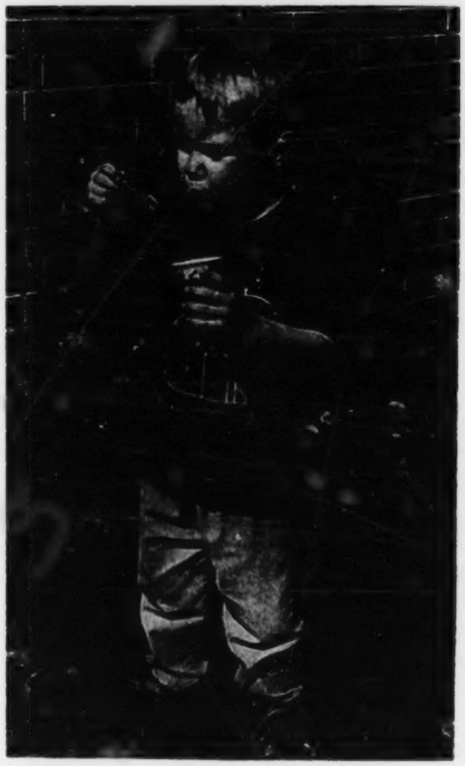
Easing Transitions



Anyone who has ever moved from one location to another or been separated from friends, knows how hard a transition can be. Going from a known, comfortable environment to one that is different and unfamiliar can be very stressful. This is often how young children feel as they move from preschool to the primary level of schooling, between groups within the primary program, and from the primary to upper elementary level. (Note: In this section, preschool refers to any group setting outside the home, for example, child care, an early childhood special education program, Head Start, nursery school.)

Increasingly, young children are participating in early childhood programs prior to enrolling in the primary level of schooling. For many children, the primary teacher is not the first teacher, and the primary class is not the first group experience outside their family.

For young children, the transition from preschool to the primary level may be met with both delight and concern. While there is the pleasure of accomplishment as they move to something new, there also may be anxiety over leaving friends and teachers they know and love for the less familiar (Chapel Hill Training-Outreach, 1986). For parents, there is pride in seeing a child grow to meet new challenges, yet there also is concern for how a child will cope with the change and what this situation may bring to their role as parents.

For the preschool teacher, the transition means saying good-by to children to whom they have grown attached, with the hope that what has been gained will provide a foundation for continued growth. For the new teacher, it means saying hello to a new group of children, with the goal of building the new program upon their diverse backgrounds and experiences.

Because learning is a continuous process, the transition from preschool to elementary school is important for all who educate and care for young children. Preschool and primary programs are important influences in children's lives. Programs in pre-kindergarten classes, special education programs, child care centers, Head Start, and family day care homes should be built on the growth taking place in the first years of the child's life. In turn, primary programs should be built on the learning and development that have taken place in the home and through earlier educational experiences (Glicksman & Hills, 1981).

Similarly, upper primary and upper elementary programs build upon primary level experiences and recognize that groups of children will exhibit a range of abilities and accomplishments. The influence of the family upon the child remains fundamental throughout these early years. It is important to link subsequent steps in children's education to their earlier experiences and to involve parents in these activities (Glicksman & Hills, 1981).

This section provides a variety of ideas for teachers and administrators as they work cooperatively to establish linkages and ease transitions between educational settings for young children and their families.

Administrators in either setting, play a crucial role in facilitating the implementation of these ideas with teaching staff. Leadership makes a significant difference in helping teachers find time to focus on the transition process. Preschool and elementary teachers should share these ideas with program directors or principals in order to gain their support.

Some programs may have already established procedures for transition. For such programs, the following suggestions can serve to renew and expand current practices. For programs that have not yet addressed the issues of transition, one or more of the ideas presented can be adopted to meet particular needs.

The critical goal of transition is to take a step forward in promoting success for children and families as they move onto new experiences.

Benefits of Facilitating Transition

When early childhood and elementary educators take time to help facilitate transition, there are benefits for children, parents, and teachers.

For Children...

When teachers work together to help children move more easily into a new environment, the results for children may include:

- Continuity with earlier educational experiences
- Increased motivation and openness to new experiences
- Enhanced self-confidence
- Improved relations with other children and adults
- A greater sense of trust between teachers and children

For Parents...

If parents are involved with teachers in providing a smooth transition for children, parents gain:

- Increased confidence in their children's ability to thrive and achieve in the new setting
- Increased confidence in their own ability to communicate effectively with the staff in the new school and to effectively influence the education system
- A sense of pride and commitment to their involvement in the education of their children
- A greater knowledge and appreciation of early childhood programs and staff

For Teachers...

Teachers who cooperate with others to ease children's transitions between educational programs can expect:

- Increased knowledge of the children and an enhanced ability to meet their individual needs
- Increased parental and community support
- Increased awareness of programs in the community and their capacity to reach out to young children and their families
- A renewed sense of professionalism and pride in their efforts to reach out to young children and their families

Elements of Successful Transitions

There are four critical elements of successful transitions for young children and families as they move between settings.

Educational staff can facilitate transitions by:

1. **Providing program continuity through developmentally appropriate curricula**
2. **Maintaining communication**
3. **Preparing children for transitions**
4. **Involving parents in the transitions**

By focusing on each of these important aspects of the transitions process, a more continuous experience can be expected for children and their families.

Providing Program Continuity Through Developmentally Appropriate Curricula

The move from level to level is made easier if each program is focused on the individual developmental needs of the children. Programs may be operating in different types of settings with children who are different ages. However, the commonalties between the way children learn and the range of developmental levels represented in each program call for similar learning environments and teaching strategies. The transition between programs is facilitated by the degree to which each program is developmentally appropriate.

How does providing a developmentally appropriate curriculum facilitate the transition between programs?

Developmentally appropriate programs provide for a wider range of developmental interests and abilities than the chronological age range of the group suggests. Since each child is unique with an individual personality, learning style, and family background, teachers at all levels need to be responsive to these individual differences (Bredekamp, 1991).

Moving to the elementary school usually means that a child will enter a new setting. However, if both settings are developmentally appropriate, children will be more likely to find similar experiences which will allow them to begin in their new setting with confidence that they have the ability to accomplish certain tasks. Knowing what is expected adds to children's self-confidence, encourages their attempts to try new experiences, and facilitates continuity in development.

What do young children have in common? (Bredekamp, 1991)

All young children learn best by:

- Actively exploring their environment
- Interacting with adults and other children
- Using concrete materials and participating in activities that are relevant to their own experiences and culture
- Building upon their natural curiosity and desire to make sense of the world around them

All young children are continuously learning to:

- Use their bodies and express themselves through physical activities
- Solve problems and experiment with change
- Develop an understanding and acceptance of themselves as individuals
- Gain more self-control and build cooperative relations with others
- Communicate their thoughts and feelings as effectively and creatively as possible

What is the significance of these common characteristics for planning developmentally appropriate curricula?

During the early childhood years, children have similar learning styles. Furthermore, each program has children with a wide range of developmental levels. For these reasons, both preschool and primary teachers may establish similar environments and approaches to facilitating growth and development. For example, preschool and primary teachers can adopt the following developmentally appropriate practices (Bredekamp, 1991):

- Designing experiences to stimulate learning in all areas—physical, social, emotional, and intellectual
- Planning curriculum and adult interactions which are responsive to individual differences in ability, interests, cultural backgrounds, and linguistic styles

- Providing an environment in which children can learn through active exploration and interaction with concrete materials, adults, and other children
- Organizing the environment so children select many of their own activities among learning areas including dramatic play, blocks, science, math, games and puzzles, books, recordings, art, and music
- Organizing the day so children work individually or in small groups most of their time
- Providing many opportunities for children to use small and large muscles, to listen to stories, and to express themselves creatively
- Facilitating the development of self-control in children by using positive guidance techniques such as modeling and encouraging expected behavior, setting clear limits, and redirecting children to more acceptable activity
- Providing many opportunities for children to develop social skills such as cooperating, helping, sharing, negotiating, and talking with others to solve interpersonal problems.

In what ways are preschool and primary children different?

Although both preschool and primary programs may have children at various developmental levels, children are incrementally older. Because this extra time has brought new experiences and natural growth, children are more likely to (Bredekamp, 1986):

- Expand beyond their immediate experiences of self, home, and family, developing interests in the community and world outside
- Show increased ability to use motor skills, to pay attention for longer periods of time, and to play and plan cooperatively
- Display a growing interest in symbols including written language and a written number system

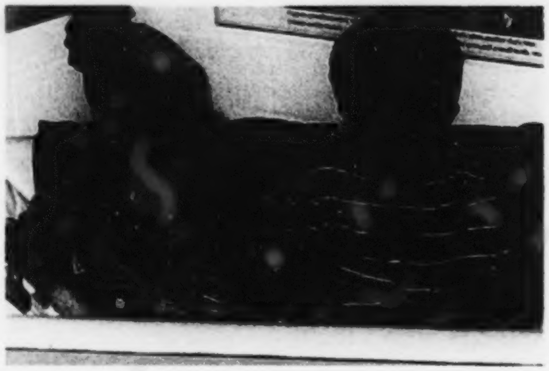
What is the significance of these differences in planning developmentally appropriate curricula?

Although the preschool and primary rooms may look similar, the primary teacher is able to (Bredekamp, 1991):

- Provide more elaboration in children's interests and activities
- Encourage more joint planning and cooperation among children
- Provide an environment which places more emphasis on stimulating written language and literacy skills which are appropriate to the individual child's developmental level and ability
- Focus on the development of more independent work habits and enhanced ability to follow teacher directions

What other differences exist between preschool and primary programs?
The settings of preschool programs and elementary schools are often different. For example (Glicksman & Hills, 1981):

- Group size in preschool programs may be relatively small—15 to 20 in center-based programs with two or three teaching staff, and even smaller in home-based programs. In elementary schools, there may be 25 (or more) children with one or two teaching staff.
- Preschool program schedules may be flexible; elementary schools may be required to adhere to a time schedule based in part on cooperative uses of playgrounds, cafeterias, gyms, or buses.
- Preschool programs may be smaller and more community based; primary programs are usually part of a larger institution with older children and different educational expectations.
- Preschool programs may be privately administered or cooperatively administered by parents; elementary schools are part of a public, private or parochial school system governed by an elected or appointed board.



Although each program can provide a developmentally appropriate curriculum, the setting and program structure may affect the way each program is carried out.

The Heart of Transition Planning

The heart of transition planning is a shared philosophy based on how young children grow and learn. All programs of care and education for children from birth to age eight should be developmentally appropriate. There are four basic elements that must be addressed and intentionally included in any early childhood program in order to meet the needs of young children.

1. **Age Appropriateness**
   Developmentally appropriate programs provide a learning environment and appropriate experiences based on knowledge of typical development of children within the age span served. Research indicates in the first nine years, children develop and progress through universal stages and predictable sequences of growth and change. Children can progress within a range of plus or minus two years of chronological age and be considered "typically developing."
2. **Individual Appropriateness**
   Each child is a unique person. Children who are developing typically move through universal stages at their own individual patterns, rates, and style of growth. Children with unique needs and abilities will be offered experiences and environments that match their developmental abilities. Developmentally appropriate programs are responsive to and honor a child's individual

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uniqueness and differences such as personality, learning style, ways of intelligence, family background, and cultural heritage.

3. **Child Initiated and Child Directed**
   Child initiated means children have control and choice in carrying out an activity but within a framework provided by a teacher. A child needs to be purposefully engaged in an activity, exploring materials with interest and curiosity, trying out ideas and involving themselves in their environment. Children are allowed to select materials or projects themselves, determine how they will interact with given materials, and decide how they will approach and solve a problem.

4. **Teacher Supported**
   Teacher supported means creating an intentional and planned framework for learning and providing materials and activities consistent with what we know about child development. Teachers ask open-ended questions that encourage inquiry, thought, discussion and reflection by the child rather than expecting simple "right" answers. The teacher responds to the needs, strengths, requests and ideas of the children so they can grow and explore. Teachers become a resource and a facilitator to children to help them "learn how to learn" rather than being the source and giver of information and knowledge (Iowa Department of Education, 1996).

Ways That Programs May Differ

- Adult/child ratio
- Amount of teacher attention and individual assistance
- Number of children in groups, class, and school
- Philosophies of instruction and behavioral guidance
- Curriculum content
- Appropriate activities
- Transportation arrangements
- Nature and degree of family involvement
- Nature of teacher's guidance or directions
- Expectations for independent play and work
- Expected knowledge of health and safety rules
- Daily routines
- Expectations for managing materials and clothing
- Expected skills with equipment
- Playground activities
- Sponsorship and regulations
- Education and experience of providers
- Length of activities
- Comprehensiveness of program
- Length of days

(Iowa Department of Education, 1996)

Elements of Effective Transitions

Key partners should be involved in the transition planning process. Broad participation in planning will result in transition practices that are appropriate. The accompanying nine-step diagram outlines the process of community transition planning.

1. All adults who are responsible for children's care and education share in developing a written transition plan for the community which includes ongoing communication and collaboration
2. Transition plans seek to involve families in decision-making and support them in active participation in their children's care and education.
3. A continuum of comprehensive, integrated, family-focused and community-based services are provided for young children and families. These will include, but not be limited to, health and social services, nutrition, transportation, and adult basic education.
4. Information to support a child's development is shared (with parent permission) across home, child care, education, and health care settings.
5. Efforts to help children feel secure across settings are bolstered by effective practices, which are sensitive to individual, language, and cultural differences.
6. A systematic approach to joint staff development is designed and implemented with administrative support, resulting in shared curriculum and instruction planning.
7. Transition procedures are writing and then followed. Transition outcomes are shared and used to improve, refine, and expand approaches.

1. State purpose of plan: transition between programs
2. Identify planners: families, teachers, support staff, community representatives.
3. Define current transition procedures, activities and timelines of each participating program.
4. Compare present transition procedures with the desired process to identify gaps and overlaps.
5. Identify practices to modify or initiate smoother transitions for children, families, programs, and schools.
6. Combine current practices and modifications into a written interagency transition agreement. Develop guidelines and materials for participants.
7. Implement the plan to meet needs of individual children and families.
8. Evaluate transitions and consider multiple views.
9. Review and revise the plan to improve transition efforts.

Steps Of Community Transition Planning

(Iowa Department of Education, 1996)

Maintaining Communication

Administrators can set the stage for successful transition activities by supporting communication and cooperation among early childhood teachers. Preschool and primary staff can increase program continuity by getting to know one another, sharing program information, and planning an effective transition system. Opportunities for communication and cooperation should occur throughout the program year. Communication can be enhanced when those involved are familiar and comfortable with one another. If opportunities are provided for participants to ask questions and provide information about themselves and their programs in an open atmosphere, the foundation is laid for effective cooperation during the transitions (Glicksman & Hills, 1981).

One of the simplest yet most important needs is for accurate and unbiased information about programs. Most teachers of preschool children are understandably proud of their programs and have a professional and personal interest in the young children enrolled. It may be difficult to "let them go" to what may seem like a more impersonal institutional setting. On the other hand, most primary teachers, equally proud and dedicated, strive to plan and carry out an educational program based on community expectations, school goals and objectives, and the children's individual needs. Although preschool and primary teachers may have taken different career paths, honest acceptance of each other's professionalism and commitment is essential to the transition process (Glicksman & Hills, 1981).

Most preschool and primary teachers have limited time outside the classroom. However, opportunities for formal and informal contact should be provided through the year. Since preschool teachers may have to interact with several "receiver" schools and primary teachers may have to contact several "feeder" programs, it may be helpful to establish a community-wide transition committee to involve all relevant programs in planning transition activities. The following suggestions may help early childhood educators begin the exchange between programs in a way that builds mutual respect and understanding.

Tips for Maintaining Communication (Glicksman & Hills, 1981)

- Preschool and elementary administrators can initiate opportunities for communication and exchange among teachers to begin planning for transitions.
- Administrators and teachers can plan an informal visit to meet the staff of each other's program. During this visit, staff members can get acquainted, share program information, and discuss the need for specific activities and other collaborative efforts.

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- In communities with a number of preschool programs and elementary schools, a committee can be organized with representatives from preschool programs, public schools, parents, and relevant community organizations. Both preschool and elementary school administrators can be instrumental in establishing the committee. Such committees can be responsible for developing a step-by-step plan and corresponding materials to be used by all programs involved in the transition process.
- Through informal contact or through the transition committee, activities can be planned to facilitate the transition process. These may include joint registration, workshops, and other activities for parents.
- Open house can be held for primary or preschool program staff to explain the program and to get acquainted. Written materials and slides of the children can be used to illustrate the daily program.

- Teachers can visit each other's classrooms during the school year to observe. Some programs may be able to exchange staff as substitutes on occasion.
- Participation on policy advisory committees can be combined where possible. For example, ask a primary teacher to sit on the preschool program board or invite a preschool teacher to join in meetings of the PTA.
- Exchange days can be planned, for example, between preschool and primary staff and between levels of the primary program.
- Joint inservice workshops can be developed which focus on transitions as well as other issues facing childhood educators.
- Preschool program administrators can write letters to receiving elementary schools in the spring listing the names of incoming children and communicating information about their program.
- Registration for the elementary school can be planned in conjunction with preschool programs.
- Health and social service staff can meet to discuss the continuity of services for children and families.
- Arrangements can be made between preschool and primary staff to provide special information and assistance for parents who speak languages other than English (including sign language) or who have limited literacy skills.
- Preschool staff can discuss the transfer of specific records to the school. The type of records available will vary. Some programs such as Head Start or those serving children with special needs may already have specific arrangements for the transfer of records. The most important concern in this area is to provide parents with their full rights to privacy regarding their children's records.
- Once children move on to the elementary school, follow-up discussions can be held in the fall to answer questions and discuss the progress of children.

Preparing Children for Transitions

Never before has early education reached as many children as it does today. Children entering primary programs may have attended full-day or half-day programs for one or more years. This group experience may have followed years of home-based care with a parent, relative, or other care giver. Because of the variety of programs available, children can enter the elementary level with vastly different experiences. In turn, primary programs are diverse in purpose, structure, and schedule (Glicksman & Hills, 1981).

Despite the variety of previous experiences, all children need to be accepted at their own developmental level. Preparing children for the transition to the primary program does not mean "getting them ready" by focusing on a narrow range of academic skills, drilling them on new rules, or retaining them in the preschool program another year. School is a place where children and parents expect to find opportunities for growth and development from whatever starting point the children bring to the new setting (Nebraska Department of Education, 1984).

Children need to know what is expected of them by adults in the new program and to have several opportunities to become familiar with the new environment. They should look forward to the new experience with a sense of excitement and anticipation rather than feeling threatened and fearful of what lies ahead. Transition activities for young children should be like those which prepare them for anything new and can include discussions, stories, games, dramatic play, and field trips.
The following suggestions can help preschool and primary teachers and administrators plan and implement transition activities for children. Many of these suggestions can be adapted to facilitate transitions from the primary to upper elementary programs.

Tips for Preschool Staff and Planning Transition Activities for Children (Kansas University Medical Center, 1986)

- Schedule a visit or a series of visits to the new school or classroom for the children. These visits can include a tour of the building and playground, lunch in the cafeteria, and/or activities in the new classroom. Take pictures or videos of these activities to share with children and parents.
- Help children feel comfortable and confident about the move to elementary school by discussing the new activities, schedules, and bus routes.
- Read books to the children that discuss changes and moves. Create a puppet show or scrap book with pictures of the new school. Allow children to express their feelings about the new school through dramatic play activities and by dictating stories. Encourage children to ask questions.
- If the primary program has different rules such as lining up to go the bus, the preschool teacher may want to play games to familiarize the children with the new procedures. However, avoid drilling them or creating anxiety about the new environment.
- Invite a child or older sibling from the primary program to visit and talk about the school.

Tips for Primary Staff in Planning Transition Activities for Children

- Invite parents to visit the school with their child during the school year before the child begins.
- Hold a back-to-school night in August so parents and children can visit the classroom, take part in sample activities, and meet other children and parents in the new group.
- Send a personal "letter from your teacher" or postcard to all new students in the later part of summer welcoming them to the new class. The school PTA might be contacted to provide resources for materials and postage.
- Plan to phase in groups of children during the first week of school in order to provide more individual attention to each child. The teacher may want to have children and their parents come in three different groups for an hour the first day or spend two or three days orienting five to ten children per day. Focusing on small groups of children during this initial period can promote a smoother transition for each child.

Selected Books to Prepare Children for Transition

Author	Title
Alexander	Sabrina
Allard	Miss Nelson is Missing!
Anderson	Carlos Goes to School
Arnold	Where Do You Go to School?
Barkin	I'd Rather Stay Home
Barkin	Sometimes I Hate School
Behrens	What I Hear in My School
Berenstain	The Berenstain Bears Go to School
Boyd	I Met a Polar Bear
Bram	I Don't Want to Go to School
Breinburg	Shawn Goes to School
Buchmeier	I Know a Teacher
Burningham	The School
Calmenson	The Kindergarten Book
Cassidy	We Like Kindergarten
Caudill	A Pocketful of Crickets
Charles	Calico Cat at School
Cohen	The New Teacher
Cohen	No Good in Art
Cohen	When Will I Read
Cohen	See You Tomorrow, Charles
Cohen	Will I Have a Friend?
Cohen	First Grade Takes a Test
Cole	What's Good for a Five-Year-Old?
Delton	The New Girl at School
Elliott	Grover Goes to School
Frandsen	I Started School Today
Gordon	Crystal Is the New Girl
Haas	A Special Place for Johnny
Hamilton-Meritt	My First Days of School

Author	Title
Harris	The School Mouse
Hillert	Who Goes to School?
Hoffman	Steffie and Me
Holland	First Day of School
Horvath	Will the Real Tommy Wilson Please Stand Up
Hurd	Come with Me to Nursery School
Isadora	Willaby
Jones	Going to Kindergarten
Lenski	Debbie Goes to Nursery School
Lexau	I Hate Red Rover
Lystad	Jennifer Takes Over P.S. 94
Mann	The 25 Cent Friend
Marino	Where are the Mothers?
Marshall	Fox at School
Marshall	Miss Nelson Is Back
Madson	I Go to School
Matthias	Out the Door
McInnes	Goodnight Painted Pony
Meshover	The Monkey that Went to School
Nichols	Big Paul's School Bus
Oppenheim	Mrs. Peloski's Snake
Ormsby	Twenty One Children
Oxenbury	First Day of School
Parish	Jumper Goes to School
Quackenbush	First Grade Jitters
Relf	The First Day of School
Relf	Show and Tell
Rockwell	My Nursery School

Author	Title
Rogers	Mr. Rogers Talks About…
Schick	The Little School at Cottonwood Corners
Schwartz	Bea and Mr. Jones
Simon	I'm Busy Too
Stein	A Child Goes to School
Steiner	I'd Rather Stay With You
Steptoe	Jeffrey Bear Cleans Up His Act
Tobias	The Dawdlewalk

Author	Title
Udry	What Mary Jo Shared
Welbar	Goodbye, Hello
Wells	Timothy Goes to School
Wisema	Morris Goes to School
Wittman	The Wonderful Mrs. Trumbly
Wolde	Betsy's First Day at Nursery School
Wolf	Adam Smith Goes to School
Wooley	Gus was a Real Dumb Ghost

(Iowa Department of Education, 1996)

Involving Parents in Transitions

A joint effort by school and home is needed to bring about smooth transitions. This continuity is important for parents as well as children. For the parent, the preschool program may be a familiar family support system where there has been frequent contact with the staff. The elementary school may represent an unfamiliar environment with a different type of program for children and families. Many parents are actively involved in their children's preschool program. Studies indicate such involvement contributes to the success of the educational program. Parents need encouragement to continue to be involved in the educational program and to help their children feel competent as they move on to elementary school. Parents can promote confidence in their children by conveying a positive attitude about the new school.

Parents also need support to work through the effect of changing programs on their daily lives. For example, locating child care that can be used in conjunction with the primary program may be a critical need for some families. As parents become more familiar with the new setting and meet other parents in their children's peers group, they gain confidence in their own power to have an effect on their children's education.

The following are suggestions for preschool and kindergarten teachers and administrators in planning and implementing transition activities with parents.

Tips for Preschool Staff to Involve Parents in the Transitions (Kansas University Medical Center, 1986)

- Provide parents with information about the school their child will attend. Include the school's address, principal's name, telephone number, and dates for registration.
- Encourage parents to attend orientation sessions the school may conduct for incoming parents.
- Discuss child care options with working parents. Provide information and referral to after-school programs. Many elementary schools provide on-site child care.
- Invite school personnel, including teachers and principals, to attend a parent meeting and discuss the primary program, the role of parents in the school, and to answer questions regarding the school program.

- Discuss the transfer of records with parents and provide "release of information" forms to be signed by the parents. Such forms should include details on "who" is releasing "what" information "to whom" and for "what purpose."
- Help arrange a visit for parents and children to the new setting.
- Create a story about the new school for parents to read to their children. Encourage parents to build their child's confidence about going to school.
- Introduce parents to parents of other children who will attend the new program. Encourage meetings of new classmates prior to school opening.
- Discuss changes in services for parents that may not be available in the elementary school. For example, some preschool programs, especially Head Start, may help parents with health appointments and transportation. This may not be available in the new program.

Tips for Primary Staff to Involve Parents in the Transitions (Glicksman & Hills, 1981)

- In the spring, invite new parents to a general orientation about the program and the opportunities for parent participation.
- Encourage parents to volunteer in the primary classroom prior to September.
- Provide a parent orientation package including the child's schedule, transportation procedures, required school forms, food service, and other program information.
- Send notes to parents prior to school opening which encourage parent involvement and offer suggestions for helping children feel at home more quickly during the first few days of school. The letter may include tips on what parents might say to their children to ease anxiety about the first day, a description of the activities planned during the initial weeks, suggestions for comfortable apparel, and bus schedules.

- Introduce new parents to parents of children already in the program. The PTA may be helpful in establishing a "buddy system" between "old" and "new" parents.

Consideration of Children with Special Needs

Additional planning will be needed for children with special needs. Planning teams should consider these questions:

1. What educational and/or Individualized Family Service Plan/Individualized Education Plan (IFSP/IEP) objectives should be written to help prepare the child for the next learning environment?
2. What additional evaluation, if any, is needed?
3. What information from the present program can be used to determine eligibility for special services?

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4. If a categorical label is to be written on the IFSP/IEP, what will it be?
5. How and when will the placement decision be made?
6. What equipment needs to be obtained for use at the new program?
7. What staff development is needed to accommodate the child's special needs?
8. What accommodations and adaptations for physical needs and environment need to be made?
9. Is there an Individual IDEA Section 504 plan for this child?
10. How will information be shared among all team members? Are all required releases of information in writing and current?
11. Is a program visit planned and scheduled?
12. Is there an annual review or comprehensive evaluation scheduled for the child this year?

The transition process for a child with special needs should be explained to families both verbally and in writing early in the year and should occur in a timely manner. This is best accomplished through a parent meeting. Parents of children receiving special education need to know their child will be moving to another level of service. Families have the right to be involved in the whole process. They need to be made aware of their right to have another individual (friend, relative, advocate) with them at transition meetings.

Accomplishing successful transition and inclusion for some children with special needs may require additional staff development for receiving staff. This will require ongoing consultation between special education and general education personnel (Iowa Department of Education, 1996).

Summary

Planning for the transition of children as they move from the preschool program to the primary level and on to upper elementary provides continuity in their early educational experiences. The transitions are made easier when **all** programs are developmentally appropriate and respond to the individual needs of each child.

Communication and cooperation between teachers at all levels lead to greater understanding of one another's programs and increased ability to plan together for the transition. When children are prepared for making the transition to a new program, they gain self-confidence and are more likely to succeed. When parents are included in the transition process, it renews their sense of involvement in their child's education.

As teachers and administrators plan and implement the ideas present in this section, they will be helping to provide a more coordinated educational experience for young children and their families.

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Active Learning in the Classroom: Common Understandings

This section provides examples of ways to structure classroom activities so that children are actively involved. By using these approaches, favorite lessons and topics can be transformed into opportunities for children to plan and direct their learning with a teacher's support and guidance. The view of learning in the primary program is based on these important principles.

- Learning requires the active participation of the learner.
- People learn in a variety of ways and at different rates.
- Learning is both an individual process and a social process.
- An active learning classroom is characterized by:
  - Children choosing from available activities, materials, and experiences for substantial portions of the day
  - Meaningful, learner-centered experiences
  - Opportunities to touch, manipulate, and experiment
  - Opportunities to ask questions, solve problems, and think independently
  - A range of expectations for all children
  - Extensive talking, reading, and writing
  - Opportunities to make decisions and to be creative
  - Respect and trust for the learner
  - Adults learning along with children
  - Opportunities to learn from mistakes
  - Integration of content areas
  - Assessment as part of the daily routine

Active Learning Through Play and Exploration

Play is the fundamental, natural, universal activity of children. Play is intrinsically motivated for personal satisfaction and is a way of learning. It is the expressive activity resulting from the child's desire to make sense of the world.

Children learn through the process of play because of an inner drive to explore, experiment, and discover. The integration of the child's intellect, emotions, and inner drive promotes the development of the whole child. This integration may be accomplished through the provision for high quality play and exploration experiences in the primary years. As children interact with objects and materials, with people, and with ideas and thoughts, the information gained through this experience is explored, tested, reflected upon and represented in a variety of ways.

Pretending enables children to represent problems and practice solving them, to ask questions and learn about the world in terms they can understand. Play is self-motivated practice in meaning-making; its themes are repeated over and over until the child is satisfied that she's got this figured out. In the process she is acquiring learning strategies, knowledge, and skills.

Jones & Reynolds, 1992

The Development of Play

As children develop intellectually, the types of play in which they engage reflect this development. Play may be categorized as practice or functional, constructive, symbolic, or as games with rules (Bergen, 1988).

Practice of Functional Play

Play of this type is characterized by (early to later primary):

- Increased motor skill
- The desire to master physical challenges
- Repetition to acquire and refine physical skills
- Repetition of gross and fine motor activities (ride bikes, bounce balls) often with numerous variations, over and over
- Practice play activities serving as rehearsals of specific skills to be used in games or sports
- Rough and tumble play
- Experimenting with new materials and combining known materials in new ways to solve problems

Constructive Play

Play of this type is characterized by (early to later primary):

- Use of materials to make a particular product representing objects, ideas, or processes (paintings, drawings, three-dimensional creations)
- Combining of constructive and symbolic play (creating a poem, dramatizing a production)

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- Combining a constructive and socio-dramatic play (creating environments to play out games, e.g., forts, boats, tents)
- Making collections, organizing, examining, discussing, trading and displaying collections (stamps, models, shells, rocks)

Symbolic Play

Play of this type is characterized by (early to later primary):

- Playing out what can be imagined
- The ability to give objects properties that suit the needs of play (a block becomes a car, telephone, hair dryer)
- The assignment of roles ("You be the sister.") becoming more elaborate and sophisticated
- Fantasy play becoming more internalized (drawing, daydreaming)
- Becoming more "miniaturized" (Barbie dolls, action figures, Playmobile people)
- Role experimentation based on experiences that are not concrete or direct (futuristic stories)
- Playing with language through jokes, parodies, riddles, and nonsense verse

Games with Rules

Play of this type is characterized by (early to later primary):

- Inability to adhere to rigid rules
- Rules viewed as fluid, flexible, and easily adapted to immediate needs
- Rules being decided upon spontaneously
- Playing at games rather than following actual rules
- Inability to understand the point of rules
- Increasing control of actions, behavior, and reactions within established limits
- Emergence of acceptance of prearranged rules
- Increasing involvement in computer games and simulations, board games, and card games
- Understanding of sports-related games (four-square, tether ball)
- Many games have characteristics more similar to social conventions rather than competitions (*Mother, Mother, May I?; Red Light, Green Light; and King of the Hill*)
- Games challenges being combined with role enactment of familiar stories
- Individual and team competition becoming more evident
- Cooperation with others becoming a necessity for competition

> *Cooperative games, in which children do not have to use strategies that require outwitting or beating one another, are more developmentally appropriate for these ages as well as more congruent with the social goals of more early childhood classrooms.*
>
> Kamii & DeVries, 1980

Teachers create environments wherein children are actively invited to seek knowledge through exploration and play. Children have an active voice in initiating learning needs. Teachers respond to these needs by planning learning experiences that are enjoyable, challenging, intellectually interesting, and which allow the learner freedom to make choices, self-direct learning, and collaborate with the teacher in the active construction of knowledge.

> *Playful approaches to higher order cognitive skills such as critical thinking...are especially important during the elementary years as children begin to be able to 'play with ideas,' testing their thinking and comparing it with that of their peers. Opportunities for creating playful challenges that have comfortable level of risk are crucial during this age period and should be available at school.*
>
> Bergen & Oden, 1988

Social Interaction

The rich environment and quality of interaction provided by the teacher can enhance experiences designed to foster intellectual development.

The teacher can enhance children's thinking and language development by encouraging the rich possibilities contained in the dialogue accompanying the child's active involvement in meaningful, developmentally appropriate learning experiences of all kinds.

Because learning is accommodative, the teacher frequently plays a direct teaching role, structuring specific situations within which a child may learn. The teacher's questions and comments to each child play a critical role in extended thinking.

When a child is expected to learn or practice independently, activities selected are usually within her/his developmental level.

> *The younger the children, the more the content of interaction should relate to their own first-hand experiences and real environment. With increasing age and experiences, children can and should be encouraged to develop their understanding of indirect experiences.*
>
> Katz & Chard, 2000

This does not mean, however, that teachers wait for the child to develop and mature. Teachers must stimulate the cognitive functions that are in the process of developing. With support or assistance, in collaborative and supportive situations, a child is capable of much more than working alone. Thus, to facilitate learning, teachers work with children or set up situations in which children work together. Vygotsky's explanation of the zone of proximal development, the "learning zone," illustrates how people are able to stretch beyond their individual capabilities toward more mature cognitive functioning when they learn together. The zone of proximal development is:

> *"...distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaborations with more capable peers."*
>
> Vygotsky, 1980

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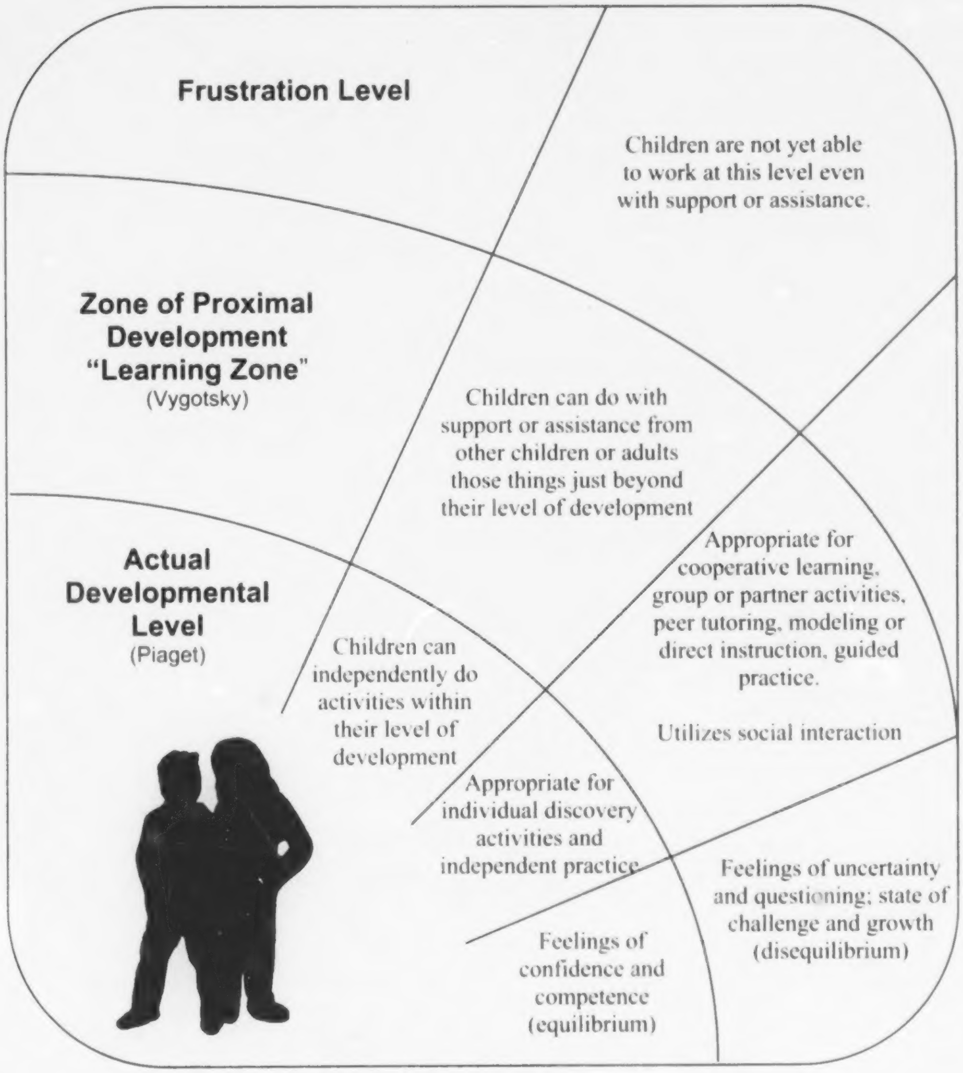
Support to Independence



Frustration Level

Children are not yet able to work at this level even with support or assistance.

Zone of Proximal Development "Learning Zone"
(Vygotsky)

Children can do with support or assistance from other children or adults those things just beyond their level of development

Appropriate for cooperative learning, group or partner activities, peer tutoring, modeling or direct instruction, guided practice.

Utilizes social interaction

Feelings of uncertainty and questioning; state of challenge and growth (disequilibrium)

Actual Developmental Level
(Piaget)

Children can independently do activities within their level of development

Appropriate for individual discovery activities and independent practice

Feelings of confidence and competence (equilibrium)

"The zone of proximal development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state."
Vygotsky, 1980

Developing Thinking through Meaningful Learning Experiences

In order for children to become thoughtful learners, they must be invited to actively engage in worthwhile activities that capture their interest and imagination. Thinking is an integral part of all aspects of the curriculum, not something to be taught in isolation as an "add on."

All children require opportunities to learn as much about how thought processes work and about their own thinking as possible so as to expand their repertoire of thinking strategies. Teachers can encourage learners to greater sophistication in the use of strategies for thinking, but for learners to internalize each strategy, they must reflect upon its use and limitations personally.

Fostering children's thinking abilities requires a supportive classroom environment in which mutual respect and cooperation, risk-taking, error, and individual differences are valued. Teachers plan experiences and guide the learners in making connections, but it is only when learners are provided with time and encouragement to talk about, represent, and reflect upon their experiences that they truly gain understanding.

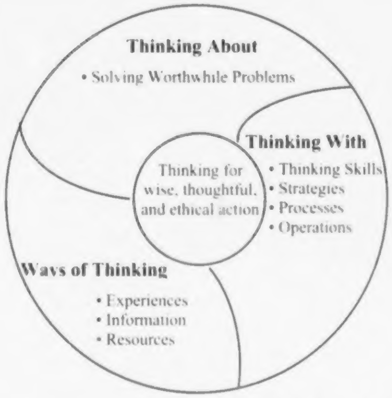
A Framework for Thinking

To make effective program decisions which enable children to inquire, represent, and reflect upon their thinking, the teacher considers thinking in its broadest sense. The following model may provide a useful framework for examining thinking.

Thinking with Information and Experience

Growth of thinking is a function of prior knowledge, information, and experience. It is the richness and variety of these experiences which shape children's thinking. Information and misinformation, concepts and misconceptions, have equal influences in developing thought.

Expanding a child's variety of learning experiences expands his or her opportunities for trying new ways of thinking.



Metacognition: encompasses awareness and understanding about

- Different ways of thinking
- Dispositions or behaviors that affect the quality of thinking
- Monitoring and evaluating thinking processes so that improvements can be made
- Thinking extrapolated to other situations

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Thinking Processes

Examples of specific thinking processes familiar to all teachers are:

- Comparing
- Sequencing
- Imagining
- Hypothesizing
- Evaluating
- Judging
- Justifying
- Clarifying
- Goal setting
- Estimating
- Synthesizing
- Predicting
- Inferring
- Analyzing
- Critiquing
- Defining
- Classifying
- Decision-making
- Observing
- Linking
- Creating
- Inquiring
- Focusing

Thinking processes can be taught. Analyzing and breaking thinking into discrete units may be helpful for instructional and diagnostic purposes. However, whatever the dominant thought process, many skills and strategies are inevitably involved in any one operation. Therefore, the teacher does not rely on any one approach or program to teach children about thinking. The teacher's instruction is guided by broad, interactive conceptions of thinking processes. Such conceptions acknowledge the complexity of thinking as well as the varied applications of thinking.

Thinking About Meaningful Problems

Thinking does not occur unless there is something worthwhile and of interest to think about. Because thinking strategies learned in a specific situation may not transfer automatically to a new situation, instruction is designed to help the learner build connections.

Some examples of important bridges that must be built through learning experiences are those between:

- Past experiences and present challenges
- Reason and imagination
- Criticism and creativity
- Teaching and learning
- Decision-making and moral judgment
- School life and real life

In designing instructional opportunities, the teacher links the thinking processes required in school with the thinking processes needed in "real" life. The teacher invites students to think about problems relevant to their own lives, to the lives of others, and to society in general. This presents children with rich opportunities for using a wide range and variety of thinking processes.

The Application of Thinking
How thinking is applied is of critical importance. Contemporary society is faced with problems of tremendous complexity. Thoughtful actions based on good judgments as well as a concern for long-range effects are desired. Ultimately, we seek a combination of development of responsibility and wise action.

Metacognition
The teacher teaches children about thinking as well as ways to apply thinking strategies. Metacognition is the term used for this process. It encompasses awareness and understanding about different ways of thinking; dispositions or behaviors that affect the quality of thinking; monitoring and evaluating thinking processes so that improvements can be made; and thinking extrapolated to other situations.

The goal of teaching thinking strategies is to develop thoughtful learners—children who have learned different ways of thinking, can apply them to real life problems, and can call upon the kind of self-criticism that guides wise action. How we apply thinking is of critical importance. Ultimately, the quality of learning and the wisdom of actions are determined by how the thought processes are put to use.

Fostering the Development of Thinking Strategies

The teacher fosters the development of thinking by engaging children in meaningful learning experiences which encourage:

- Inquiry
- Representation
- Reflection

Inquiry

Children who are provided with opportunities to ask questions of themselves, classmates, teachers, and other adults will develop skills that promote lifelong learning. The role of the questioner, formerly that of the teacher, needs to be jointly assumed by the learner so questions can be asked, solutions sought, and learning enhanced. As children are encouraged to ask questions for the sake of learning, their interest in and responsibility for their own learning increases. The environment in which mistakes are accepted as a natural part of learning allows each child to take risks and develop the confidence to become an "inquiring voice" (Watson, Burke, & Harste, 1989). In considering the development of a thoughtful, questioning learner, the inquiring teacher might ask:

- Does the child generate questions?
- Is the child committed to his or her questions?
- Does the child ask different kinds of questions?
- Does the child like finding out?
- Does the child shift thinking as a result of new knowledge gained through asking questions?
- Does the child show joy in learning?

> *Being human entitles you to an inquiring voice, and it's from asking new questions and old questions for which current answers seem unsatisfactory that real learning emanates.*
>
> Watson, Burke, & Harste, 1993

Representation

Children acquire knowledge as they think about and try to make sense of their world. They represent this knowledge as they give form to personal thoughts and ideas and communicate their thinking. Children need repeated opportunities to represent their experiences and thoughts in a variety of ways.

Levels of Representation

Representation may occur at three levels: concrete, transformational, and symbolic/abstract. Children represent their thinking in a variety of ways at each level (e.g., talking, which is abstract, begins before the age of two).

- *Concrete Representation*—direct representation using overt physical action and/or three-dimensions
- *Transformational Representation*—indirect representation, resembles the concrete, uses two-dimensions
- *Symbolic/Abstract Representation*—symbols bear no direct resemblance to the concept represented

As children explore a variety of forms of representation, the teacher provides them with opportunities to select how they might wish to represent their learning. In this way, children develop an appreciation of representation not as a "decoration," but as a way to reflect upon and communicate their thinking. In this way, too, the teacher assists each child to make connections and transfer ideas from one context to another, matching appropriate representational strategies to specific situations (e.g., "I want to know what you understand about light." Appropriate strategies: experiment, model, art, photography, written report, collection, etc.).

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Representation of Knowledge

		Forms of Representation	
LEVELS OF REPRESENTATION	**Concrete**	▪ Imitation ▪ Dramatic and socio-dramatic play ▪ Clay, sand, block construction ▪ Dance, creative and rhythmic movement ▪ Three-dimensional models including concrete graphs and maps	▪ Creative dramatics ▪ Puppetry ▪ Music ▪ Responsive movement ▪ Counting with objects
	Trans-formational	▪ Drawing ▪ Painting ▪ Collage ▪ Pictures ▪ Pictorial signs	▪ Pictographic writing ▪ Gestures ▪ Tally marks ▪ Pictorial graphs
	Symbolic/ Abstract	▪ Talk or related expressive forms ▪ Conventional writing (alphabetic or related expressive forms) ▪ Symbolic paintings ▪ Mathematical symbols ▪ Musical notation ▪ Symbolic signs ▪ Symbolic graphs and maps	

Children have opportunities to more closely examine their own thinking as they are encouraged to choose different forms of representation and explain these choices. Choice of representational forms also enables more learners to represent thinking in ways that match individual learning styles. As children have opportunities to select ways of representing their knowledge, teachers have opportunities to evaluate children's thinking and to examine each child's ability to communicate knowledge meaningfully.

Reflection

Children require time and encouragement to reflect upon their thinking. Through reflection, children may be helped to clarify thinking, to reconsider ideas, and make new connections. This allows children to monitor and assess their thinking. As well, the teacher places value and emphasis on the process used to arrive at the product of thinking rather than on the product (or answer) itself. In this way, the child and the teacher both develop greater understanding of the child's thinking. The teacher who values and models reflective thinking and who provides time and encouragement for children to be reflective greatly enhances children's abilities to solve problems and make thoughtful decisions.

Using Language to Facilitate Thinking and Learning

It has been said language is not only the vehicle of thought but also its driver. We clarify and extend thinking as we communicate through language. Children need opportunities to develop ideas through language and to talk about their thinking. Through language, children discover, generate, and express ideas; explore and extend ideas; examine, reflect upon and refine ideas and thinking processes.

Language and Thought

Language and thought are interrelated and interdependent. Language is a means of structuring and representing knowledge and is, therefore, an integral part of intellectual development. For example, language enables us to deal with concepts of past and future, so increasing the range, flexibility, and fluency of thought.

The relation of thought to word is not a thing but a process.

Vygotsky, 1986

Children learn not only the language system of those around them but also the values and attitudes that are inherent in the way language is used. If we don't talk to children except to give them orders, they will grow up to learn that language is used mainly to control. They may never learn that they can use language to explore and learn about their world. However, if children are accustomed to engaging in talk that allows them to express what they think, to ask questions, to reflect on their thinking, and to form new ideas, they will learn the value of language as a means of gaining knowledge and of understanding the world. Thus, language becomes a vehicle for learning, and children will seek ways to communicate with others in this way.

Representation through Language

During the primary years, the child's language develops as part of a larger and more complex system of representation. Language is the most complex and abstract mode of representation. While other forms of representation (e.g., construction, modeling, drawing, moving) bear some resemblance to the objects or events they symbolize, language is expressed in symbols bearing no such resemblance. Language often accompanies other forms of representation and plays an important role in that representation.

Children develop the ability to represent things and to communicate ideas through oral language, for example, by:

- Using names for objects in the environment
- Using words to identify the properties and functions of objects
- Using words to denote location in space and time
- Using words that describe relationships (comparing, describing differences and similarities, enumerating, measuring, ordering)
- Using words to relate physical knowledge
- Using words to relate social knowledge
- Using words to describe events and tell stories
- Using words to convey personal feelings and thoughts

Through language, we communicate needs and desires, gain and pass on information, and direct the actions of ourselves and others. Representation through oral language is of significance in the primary years since it is critical for communication and enhances cognitive development. As children learn to read and write, they represent their ideas in written language and begin to read the printed form.

In considering the importance of language in the primary years, we are reminded that:

- The level of language children have acquired in early years, their understanding of oral language, and their experiences in hearing and seeing written language are decisive factors in developing the ability to read and write.
- To become literate, children need rich experiences with both spoken and written language.
- The teacher needs to make use of every opportunity possible to extend and enrich the child's understanding and use of language.

The language of children varies widely according to their stages of development. The child's explorations during the sensorimotor stage prepare a foundation for the emergence of language. The pre-operational stage influences the child's construction of language. Upon entering the concrete operational stage, the child's thinking becomes operational or logical This emergence of logical thought further influences the development of language and is accompanied by related changes in language usage.

Using strategies for appraising children's language assists the teacher in understanding the child's language, thinking, and representational abilities. The teacher needs to be alert to the child's language to recognize the kinds of knowledge being represented as the child communicates with others in the course of the school day.

For example, one child may have learned a word but may not understand the concept. Another may be familiar with a concept but not have the language. Yet another may understand a concept and have the language, but may be reluctant or unable to talk, although he or she may be confident about representing knowledge in other ways (constructing, modeling, drawing, and moving). Engaging young children in "hands on" and "minds on" activities gives the teacher many opportunities to foster and enhance language representation. The ways in which teachers dialogue with children as they learn enable them to foster the child's language and thinking and to observe the development of the child's ability to represent and communicate through language.

Using Language for Communication

To communicate effectively in listening, speaking, reading, writing, viewing, and visual representation, children need opportunities to:
- Use language for a variety of purposes
- Use language in a variety of forms for a variety of audiences
- Understand and interpret ideas through listening, reading, and viewing in developmentally appropriate ways
- Express thoughts, knowledge, and feelings through speaking, writing, and visual representation in developmentally appropriate ways
- Develop an understanding of the nature and purposes of language
- Learn about other forms of communication such as signing

In order to develop effective communication, children also need opportunities to:
- Hear good language models
- Engage in dialogue with adults and other children
- Play with ideas and language
- Experiment with language in all its forms
- Experience and respond to literature and non-fiction

Factors Affecting Language Development

Children are born with an innate ability to learn language systems. But many factors affect their development of language processes and skills including:

The family's language: The language of the child's family is probably the greatest factor governing which language is used, how it is used, and the degree of complexity with which it is used.

Expression of needs and wants: The very strong motivation in young children to express their needs and desires leads them to master the language system of the family. If children get no response to their use of language, they may not pursue it and may become delayed in their acquisition of language.

Natural curiosity: Natural curiosity about the world requires children to use language to make meaning. Attaching language to real, first-hand experiences allows children to create different ways of thinking about, looking at, and understanding the world. This understanding leads to a greater sense of competence of being able to understand and influence what goes on around them.

Stage of development: The way children use language reflects their way of perceiving the world. Each child has a unique way of expressing himself or herself. Young children do not use an adult system of language because their thinking processes are not adult. Their use and understanding of words as they represent concepts develops as children move from the concrete operational to the logical thinking stage.

Dialogue: Dialogue between child and adult and between child and child is essential for the continuing growth and development of a child's language. It is the quality of verbal interaction between child and adult that governs the quality of a child's thinking and use of language. The teacher of young children engages them in conversation dealing with their experiences and helps them relate this to their new learning in order for optimal development to take place.

Developing Communication Skills

Communication skills develop in a social environment that offers opportunities for children to communicate in natural, meaningful ways. The teacher promotes and develops communication by consciously planning for these and by modeling a caring, thoughtful, and sensitive tone in interactions with children. The teacher demonstrates his or her own commitment to language development by establishing a supportive environment that promotes effective communication.

Activities and experiences which have value and relevance in the classroom and to the world beyond school are fundamental for children to become self-directed, to think divergently, and to apply problem-solving strategies. This increased sense of self-direction and growth in autonomy enables children to approach new learning with enjoyment, confidence, and satisfaction allowing them to embrace all that life has to offer and to see the potential of each new experience.

We need to shift the focus from either content or process to human educational development. There may be many roads to this end, but some avenues have withstood the test of time. Students who learn how to communicate effectively, who can organize and direct their attention and efforts, who have a healthy curiosity and skepticism, who understand how to inquire and who can ask the right questions, and who recognize something about how we as a species have come to know and believe things and have expressed ourselves about the great themes of human life, these students seem to be best equipped to direct their own lives and act to change their circumstances and those of others for the better.

McClaren, 1989

Active Learning in the Classroom: Planning for Learning

Daily Planning

As teachers plan for daily learning experiences, it is important that these plans remain flexible to reflect and accommodate changing needs and priorities, teachable moments, happenings in the school and neighborhood, unexpected visitors, and other unanticipated circumstances. When planning, consideration should be given to the following:

- Stages of development and unique needs of children
- Pre-scheduled blocks of time, for example, library, gymnasium, art, music
- Curriculum in the primary program:
  - Longer blocks of time to allow for integrated studies;
  - Areas of curriculum which do not integrate naturally, for example, mathematics does not always integrate with themes or topics of study
  - Areas of curriculum which may be taught by specialists, for example, Spanish, music
  - A balance of curriculum areas over a week or month
- Experiences on a daily basis including:
  - Personal writing (journals)
  - Reading independently (SSR—Silent Sustained Reading, DEAR—Drop Everything and Read)
  - Physical activity
  - Mathematical experiences
  - Play
  - Reflection time
- A balance of activities including:
  - Large group, small group, and individual
  - Teacher-directed, child-initiated
  - Less active, more active
  - Teacher input, child input
  - Direct instruction, exploration
- Whole class instruction for specific skills or processes, for example, use of microscopes, class routines and expectations
- Input from children about the daily plan
- Establishing daily routines which provide a framework for expectations regarding daily/weekly activities
- Physical movement and active involvement in learning experiences

- Time to reflect upon new learnings, unsolved problems, feelings, future learning needs and goals
- Daily opportunities for teacher observation
- Learning with other teachers and "buddying" with other classes
- Parents as participants in the classroom
- Accommodating dismissal schedules, for example, half-day, first year students
- Repetition of daily routines and schedule where possible
- Flexibility to accommodate changes such as a longer attention span, increasing repertoire of skills and knowledge, greater independence and changing attitudes

Daily Plan Sample 1

9:00 a.m.	**Group Time**—Opening Activities
9:15 a.m.	**Writing Time**-Personal writing, journals, logs
9:30 a.m.	**Integrated Studies*** Themes, projects, topics of study Learning Centers Curriculum blocks Writing process Library
10:30 a.m.	**Outside Time**
10:45 a.m.	**Literature**—Teacher reads to children
11:00 a.m.	**Physical Activity Time**
11:30 a.m.	**Integrated Studies** (Dismissal of half-day children)
12:00 p.m.	**Noon Hour** (lunch, outside)
1:00 p.m.	**SSR** (Silent Sustained Reading) or **DEAR** (Drop Everything and Read)
1:20 p.m.	**Integrated Studies**
2:40 p.m.	**Group Time**—Reflection and closing activities
3:00 p.m.	**Dismissal**

*mathematics, language arts, physical education, social studies, science, fine arts, responsible living

Daily Plan Sample 2

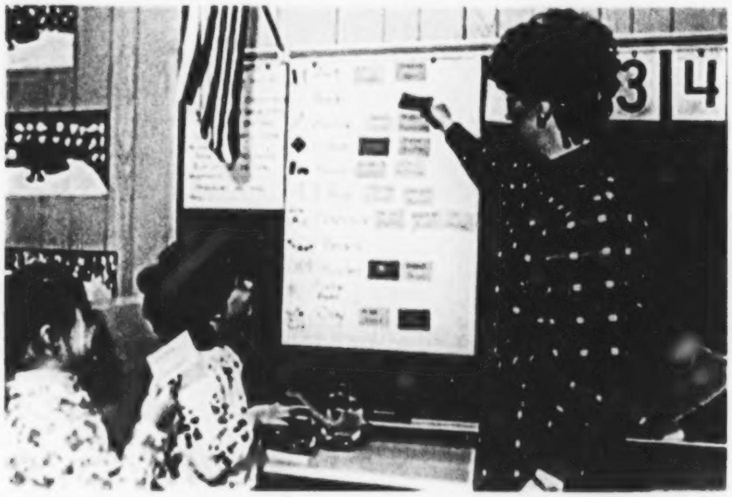
9:00 A.M.	**Buddy Reading**—children come in and begin reading with a buddy.
9:15 A.M.	**Shared Reading Experience**—the piece of literature is related to a theme, project, or topic.
9:30 A.M.	**Reader's Response**—in their response logs, students address literature which has been read in a variety of ways.
9:45 A.M.	**Learning Centers**—are shared between classrooms. Due to a lack of space, some centers may be located in hallways. During center time, children represent their knowledge of the book read during shared reading experience in a variety of ways: painting, modeling, drawing, writing, reading, graphing, puppets, construction.
10:30 A.M.	**Recess**
10:45 A.M.	**Sharing**—Students share their representations. They bring their paintings, plays, poems, etc. and talk about how they have made sense of the story. (Note: Children's drawing, painting, coloring or building take different formats based on their developmental levels.) After sharing orally, students return to their response logs and reflect on their learning. Sometimes we use the stem—"What I have learned. What I still wonder about…" Music, drama, gym, and computers integrate into our schedule.
11:00 A.M.	**Integrated Block/Projects**—language arts, science, math, social studies, fine arts
11:45 A.M.	**Reflections**—"What did you learn today?" "What do you still wonder about?"

Daily Plan Sample 3

8:50 a.m.	**Look at Books/Personal Reading Time**
9:00 a.m.	**Opening**—Helper, Pledge, Attendance, New Message Calendar
9:15 a.m.	**Large Group** (Correlated Curriculum/Shared Reading)
9:30 a.m.	**Specials**: M-Music, T-Computer, W-PE, Th-Art, F-PE
10:00 a.m.	**Large Group** (Phonics)
10:10 a.m.	**Small Group Workshops** (Language/Literacy)
10:40 a.m.	**Small Group Workshops** (Math)
11:00 a.m.	**Plan-Do-Review**
11:40 a.m.	**Outside**
11:50 a.m.	**Dismissal**

Daily Plan Sample 4

8:15 a.m.	**DIRT**—(Daily Individual Reading Time) or personal writing or reader's theatre or book talks (sharing why someone might like to read your book) or buddy reading
8:45 a.m.	**Shared Reading Experience**—the piece of literature is related to a theme, project, or topic.
9:00 a.m.	**Theme work** Reading and writing process Science/social studies/language arts
10:00 a.m.	**Sharing**—children share theme work in small groups
10:15 a.m.	**Integrated block/projects**
11:35 a.m.	**Lunch**
11:55 a.m.	**Shared reading**—"big books," "echo reading"
12:10 p.m.	Outside play
12:45 p.m.	**Class meeting**
1:00 p.m.	**Planning time/centers/math**
1:50 p.m.	**Story**
2:05 p.m.	**Reflections**
2:15 p.m.	**PE/music/library on alternate days**
3:00 p.m.	**Get ready to go home**



Daily Plan Sample 5

8:40 A.M.	**Morning Meeting**
9:05 A.M.	**Choosing Time** Must do today ________________________
9:10 A.M.	**Integrated Activities**
9:45 A.M.	**PE** ________________________
10:10 A.M.	**Recess**
10:30 A.M.	**Integrated Studies**
11:00 A.M.	**Sharing** ____________ **Music** ____________ **Story** ____________
11:30 A.M.	**Kindergarten children go home**
12:00 NOON	**Lunch**
1:00 P.M.	**Buddy Reading**
1:15 P.M.	**Afternoon Meeting** Discuss
1:30 P.M.	**Integrated Activities** **Individual Reading Conferences**
2:30 P.M.	**Clean-up**
2:40 P.M.	**Sharing** ____________ **Story** ____________ **Other** ____________
3:00 P.M.	**Reflections** ________________ **Reminders** ________________
NOTES:	

Daily Plan Sample 6

Primary Intermediate Classroom

Time	Monday	Tuesday	Wednesday	Thursday	Friday
	News, day's Agenda				
8:55 a.m.	Math	Math	Math	Art	Math
10:30 a.m.	Music	Library		Math	Math
10:45 a.m.	RECESS				
	Language Arts/Integrated Studies Reading, writing, speaking, listening, representing, journal discussion, read aloud, handwriting				
12:00 noon	LUNCH				
1:00 p.m.	SSR/Writing & Conferencing	SSR/Writing & Conferencing	PE	SSR/Writing & Conferencing	SSR/Writing & Conferencing
	Projects/Themes, Integrated Science, Social Studies, Fine Arts				
2:45 p.m.	Reflection—What did we learn today? Questions? I wonder? Direction.				

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Sample

Activity Plan

The sample document is to be used as a flexible organizer to help the teacher incorporate theory into practice.

Topic (big idea)
Activity
Materials (list the materials available to the child)
Manipulation (describe the use of the materials)
Choice (what options does the child have?)
Language (opportunities to use words, child-to-child, adult-to-child)
Support (in what ways will adults or peers help the child think about his or her work?)
Time (for exploring, communicating, processing)

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Active Learning in the Classroom: Classroom Organization

Planning the Classroom Space

In planning how to organize a classroom, a number of considerations may be helpful. Individual teaching styles, children's learning needs and styles, and physical facility will have bearing on classroom arrangements. Involving the children in creating and maintaining the classroom environment helps them to develop planning skills, responsibility, and feelings of self-worth. The following is a list of planning suggestions:

- Provide a classroom arrangement that reflects the integrated nature of children's learning
- Involve children in planning how to organize the room
- Consider both safety and ease of access when placing furniture and storing materials and equipment
- Consider the best spot to place movable furniture so it can be moved when extra space is required
- Plan space for individual, small and large group activities
- Consider where quiet work areas might be used for conferencing or individual work
- Collaborate with other teachers to share space and/or equipment or even portable centers (sometimes this can be done with an intermediate teacher whose students are buddying with the primary children)
- Evaluate the learning environment continuously and adjust the arrangement if students' needs require it
- Place things to provide an attractive atmosphere
- Place a variety of examples of print at the students' level

Some centers may be permanent...some may be portable, perhaps stored in bins, buckets or on a table and easily moved; and some may be temporary, used for a specific purpose for a short period of time.

Schwartz & M. Pollishuke, 1991

Classroom Arrangements: Facilitating Learning

Classroom arrangement is an important factor in facilitating children's learning. Even more crucial, however, is the way in which teachers interact with children. While this document includes a section on learning centers, it is recognized that learner-focused programs are not dependent on using the learning centers model. Having centers is not the key condition for active learning. The essential elements are flexibility, adaptability, and response to children's needs in a supportive climate of inquiry. Building a child-centered program requires more than arranging materials and furniture. It demands that we use our knowledge of children and how they learn to guide our decisions about what tasks we ask children to do.

Classroom Arrangements: Learning Centers

Learning centers are one way to provide for individual differences in a classroom. The number of learning centers set up at any given time will vary according to the teacher's personal style and the children's learning needs. The following suggestions may be useful when planning a learning center:

- Allow children to contribute materials, ideas, questions, and tasks to the learning center.
- Position the center in a place that is complementary to the activities of other centers around it.
- Vary the complexity and difficulty of the tasks in the center.
- Provide a choice of activities and expectations that acknowledge a variety of learning styles.
- Consider tasks designed for independent learning or small group work.
- Consider current themes and projects.
- Choose tasks that are relevant and meaningful for the children.
- Allow for multiple ways for children to represent their learning.
- Model how materials can or should be used as they are introduced to a learning center

The number, kind, and content of the learning centers will vary and change during the year. To facilitate the successful use of learning centers, teachers may find the following ideas helpful:

- Introduce a new learning center to the children by explaining the features, points of interest, choices of activities, and any other significant aspects that need special attention. This can be done by the teacher, buddy, or an experienced peer. (One cannot assume that every child will understand what is expected in any given learning center or that every child will feel bold enough to solve the problem independently.)
- Elicit from children strategies for solving problems they may encounter when working in a learning center (for example, what to do if the directions are unclear or what to do if there is a problem in sharing equipment).

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- Encourage children to assist in planning and organizing the learning center.
- Discuss with children expectations of appropriate behavior in the learning centers. Include their suggestions when clarifying these expectations.

Consideration should be given to where a learning center is located as well as to what materials it contains. Placement of learning centers is governed by awareness of safety, interference caused by noise, space available, and movement patterns. Locating learning centers so that materials and activities of a learning center facilitate, supplement, and complement those of another center supports integration and allows children to select from and adapt the environment to suit their needs. Children should be given the opportunity to discuss the spaces for the centers and assist in the acquisition and placement of materials. Some possibilities for learning centers are presented in the following section.

Group Meeting Area

This is the place where new ideas and activities are introduced, where familiar activities are reviewed, and where field trips and other experiences are remembered and reflected upon. Parts of the program carried out in this area provide children with fresh input and ideas and with the opportunity to learn or try new things, to predict, to problem-solve, to listen to good literature, to review and enjoy the familiar, and to reflect, talk, and reason about their experiences.

Group Meeting Area

Suggested Activities

- Opening and closing activities
- Class meetings
- Introducing books and sharing good literature
- Learning about food and nutrition
- Planning, discussing, developing language and thinking
- Music, movement, singing, dancing, drama, and appreciation of the arts
- Counting, graphing, grouping, comparing, estimating, problem-solving, and other mathematical activities
- Writing letters, reading recipes, charts, songs, and poems
- Sharing "news," recording experiences, and other literacy related activities

Suggested Materials

- Carpeted space
- Chart stand and paper, flannel board
- Chalkboard
- Magnetic board
- Big book easel
- Teacher chair or stool
- Record player
- Tape recorder
- Rhythm instruments (stored nearby)

Reading Area

The reading area is intended to supplement the library resource center and provide opportunities for children to have daily access to familiar and favorite books, poetry, stories, and information. A special feature of the class collection is the child-authored books.

Concept books, pattern books, big books, and a wide variety of children's literature from the book center are read to children during story time and are available for rereading. Teachers may choose to tape record their story time readings so individual children can hear the stories again. Children are encouraged and given time to read at their stage of development. In this manner, emergent reading patterns can develop. Older primary children will enjoy independent reading activities at this center.

Students beginning to work in centers need to learn routines, expectations and responsibilities, need to strengthen self direction and independence, and need to develop attitudes towards learning and working at centers.

Schwartz & Pollishuke, 1991

Suggested Activities for the Reading Area:

- Read and reread favorite stories
- Share observations and predictions, discuss, and answer questions about books, stories, and other print materials
- Retell favorite stories
- Role play characters of situations from stories

Suggested Materials for the Reading Area:

- Big books with accompanying small books and tapes
- Selected variety of quality children's literature including non-fiction/informational text
- Class-made and child-authored books
- Research and resource books for a variety of topics related to themes, projects, seasons, field trips
- Class news board
- Reading logs/charts
- Poems and songs on charts
- Language experience charts
- Pictures with captions
- Calendar, graphs, helper charts
- Name tags
- Tape player and individual tapes
- Film strip/cassette
- Props for role playing

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Drawing, Writing, and Publishing Area

Drawing provides the child with a way of saying things that cannot easily be said in words. This nonverbal representation of thought is closely linked to oral discussion, which can be extended to the written expression of those thoughts. This learning center provides a place where children can play with literacy materials and express themselves through print. This is a place where children explore the nature, purpose, and function of written language, each operating at his or her own level. The teacher responds to children's requests for information or help with the conventions of print

Suggested Materials for the Drawing, Writing, and Publishing Area

- Pencils and crayons
- Felt markers (broad and fine tip)
- Paper of different sizes, shapes, colors, and textures
- Envelopes
- Staplers and hole-punchers
- Homemade books in different shapes and sizes (a few pages with a variety of colored paper covers)
- Wallpaper books
- Hooks for storing words
- Word cards
- Pocket chart
- Sentence strips
- Typewriter
- Magnetic letters (upper and lower case) and numerals
- Labels from containers
- Computers and printer
- Small chalkboards
- Word lists
- Dictionaries and thesaurus
- Draft and date stamps

Art Area

Art materials should be easily accessible to encourage use. Materials and appropriate storage are provided, techniques and processes are explained and demonstrated so children have the opportunity to explore, experiment, and represent their feelings and ideas. Depending on the theme, project, interest, or topic of the moment, the teacher may introduce related materials and techniques.

Suggested Materials for the Art Area

- Crayons
- Oil pastels
- Chalk
- Finger paint
- Liquid paint
- Cake paint
- Screens
- Toothbrushes
- Cotton balls
- Brushes
- Straws
- Empty deodorant bottles for roll-on painting
- Sponges and cotton swabs
- Fabric and string
- Wood
- "Junk" boxes
- Tissue and crepe paper
- Various objects for printing
- Painting brushes (variety of shapes and sizes)
- Play dough and clay
- Modeling tools (cutters, garlic press, spoons, meat hammer)
- Leaves
- Wax, tape, glue, paste
- Staplers
- Felt pen

Painting Area

Paints and paper are materials children need to use freely and creatively. They enjoy painting for its own sake and, although adult interest provides encouragement, painting is essentially a private activity. The opportunity to paint should be available every day for every child. Painting enables the child to experiment with color and technique, to explore the properties of the various media, to create and elaborate upon personal symbols, to create and respond to pictures, and to represent what is known from experience. The opportunity to try a variety of papers, paints, colors, and techniques is offered at the painting center.

Suggested Materials for the Painting Area

- Powdered and liquid tempera
- Finger paints
- Liquid starch (to extend paints, use with chalk, make fingerpaint)
- Liquid soap (to fingerpaint with)
- Oil pastels
- Tempera blocks
- Watercolor paints
- Marking pens
- Fluorescent crayon or paints
- Variety of brushes
- Large painter's brush
- Tongue depressors or chopsticks for mixing paints
- Easels or table top space
- Drying rack or line
- Containers for paint
- Cotton swabs
- Sponges
- Straws
- Rollers
- Tooth brushes

Sand and Water Areas

Sand and water may be part of the art area, together in one area or as separate areas, depending upon available space. As children explore the properties of sand and water through play, they gain new insights by interacting with each other and with the teacher, who provides suggestions or questions that enhance and extend the experiences. Children extend their scientific and mathematical knowledge as they engage in activities that utilize sand, water, and other materials.

Suggested Materials for Water Area

- Water and water table
- Containers varying according to size, shape, and function
- Sponges
- Corks
- Cups
- Water can
- Eye dropper
- Bowls
- Measuring cups
- Straws
- Siphon
- Pouring spouts
- Egg beater
- Sieves and strainers
- Squeeze bottles
- Plastic tubing or hose
- Objects that sink or float
- Water wheel
- Water pump

Suggested Materials for Sand Area

- Dry sand container
- Wet sand container
- Dust pans
- Brooms
- Cans
- Gelatin molds
- Cookie cutters
- Funnels
- Graduated measuring objects
- Watering can
- Bucket and shovel
- Spoons and scoops
- Sieves and strainers
- Salt and pepper shakers
- Cars and trucks
- Animals
- Fences
- Balance scales
- Egg timer
- Sand wheel
- Props supporting topics of study

Block Area

As children play in the block area, they represent their thinking in three-dimensional form. Intellectual development occurs as children sort, classify, measure, evaluate, and solve problems. Concepts such as size, space and time develop. Children represent what they know from experience by constructing, planning, talking, and engaging in dramatic play. The conversation and cooperation necessary to plan work with others on construction projects and the satisfaction gained promotes social and emotional development. Children are encouraged to draw, paint, map, label, talk, or write about what they are doing as a further extension of their activities.

Suggested Materials for the Block Area

- Block and toy shelves
- Wooden blocks
- Cardboard blocks and boxes
- Table blocks
- Hollow blocks
- Multilinks
- Cuisinaire rods
- Geometric shapes
- Attribute blocks
- Pattern blocks
- Vehicles and traffic signs
- Wooden people
- Animals
- Buildings
- Hats
- Masking tape
- Paper
- Roads
- Plastic cups
- Lids
- Fabric scraps
- Writing tools
- Paper cylinders
- Blankets or sheets

Dramatic Play Area

The dramatic play area allows children to interact, experience, and recreate real or imaginative situations, places, or roles. As individuals or groups, children can plan, rearrange, and make changes to the area which reproduce real life experiences. Spontaneous dramatic play accompanied by dialogue with the teacher can aid in solving problems and clarifying through language. Participation stimulates development as children become involved in detailed planning, sharing, and cooperating. Reading and writing (writing plans, making signs and labels) are encouraged whenever appropriate. Encouraging children to bring items from home to facilitate dramatic play promotes involvement.

It may be useful to store some items in separate "prop boxes" or small suitcases. An overabundance of materials can make cleanup difficult for children. Once the kinds of prop boxes have been determined and how items will be stored and labeled they can be sorted and enlarged. Children and parents will contribute items if a stimulating list is provided to get the process started. Other items can be "scrounged" from stores, repair shops, lumber yards, garages, and through newspaper advertisements.

Suggested Materials for the Dramatic Play Area

- Child-size furniture
- Kitchen supplies
- Dolls and accessories
- Dress-up clothes and props (scarves, shoes, hats, ties)
- Full-length mirror
- Food models
- Child-size box
- Print materials (maps, phone books, coupons)
- Writing materials
- Steering wheel
- Keys
- Flowers and plants to arrange
- Theme props (hospital, space lab, camping, museum, rain forest, community helpers, grocery store, office)
- Puppet theatre/store front
- Puppets
- Commercial puppets
- Material for handmade puppets (socks, bags, sticks, paper, yardage, buttons); these might also be stored in the art area

Exploration Area

The exploration area provides the opportunity to explore and experience a variety of materials in a systematic way. Materials which reveal natural phenomena encourage experimentation and inquiry.

While children experiment with using materials and equipment in this area, they are engaged in many processes. They observe, using their senses to perceive similarities, differences, and changes. They classify, organize, and sort. They quantify, comparing by length, area, volume, mass, temperature, force, and time. They communicate their understanding to others through oral language, charts, graphs, and language experience. Finally, they infer (based on past observations) and predict.

Suggested Materials for the Exploration Area

- Water
- Magnets
- Magnetic board
- Magnifying glass
- Magnifying stool
- Weighing tools
- Microscope
- Measuring tapes/sticks
- Base ten blocks
- Tangrams
- Plants
- Clock
- Batteries and bulbs
- Thermometers
- Prisms
- Kaleidoscope
- Simple machines and gadgets (telephone, old radio, control boxes, circuit boxes, clocks)
- Tools (screwdrivers, pliers)
- Touch and feel box
- Textured materials
- Paper and writing tools for representing observations
- Safety glasses

Other Learning Centers

The number and duration of learning centers will vary according to the interests, topics of study, and projects in which children are engaged. The list in this section does not exhaust the possibilities for types of centers or materials. Other learning centers which might be considered are:

- Music area
- Computer area
- Cooking area
- Listening area
- Quiet area

Ways to Facilitate Children's Learning

There are many ways to organize curriculum and classroom activities so that children are engaged in learning. Many teachers use projects and themes as organizational options. Regardless of the ways teachers choose to organize, there are some factors to keep in mind:

- Is this an intellectually worthwhile project?
- Is this topic, theme, project of interest to the children?
- Is the scope broad enough to allow for specific personal interests? For example, the topic of "Living Things" lets children choose their focus, while "Ants" may be of interest to a limited number of children.
- How much time should I allow for this? Some topics which excite the children need time for research and active involvement while others can be of a shorter duration.
- Are there resources available to support this study?
- Does this strategy facilitate the learning of skills and processes, knowledge, and the development of attitudes?
- Over the course of the year, does the theme, topic, or project provide balance and complement the other endeavors of the class?

Active Learning Strategies

Part of this document is devoted to planning projects and themes, including specific examples. In order to implement projects and themes effectively, teaching and learning strategies must reflect the principles of active learning. Some valid strategies include:

- Children's news, for example, A child brings acorns which spark other children's interest in collecting and finding more about …
- Teacher's contributions, for example, The teacher is moving to a new house which precipitates a need to know more about …
- Local events, for example, The town centennial celebration motivates learning about and representing past and present community events.
- World news, for example, A tornado warning is the starting point for a study of storms and safety procedures.
- Teaching strategies such as story telling; for example, stories in science, humanities, and fine arts.
- Broader strategies such as play-debrief-replay and plan-do-review. These are elaborated on the following pages.

Play-Debrief-Replay

The use of play as an instructional approach is happening every day in classrooms everywhere. This model is explained clearly in Selma Wasserman's book, *Serious Players in the Primary Classroom: Empowering Children Through Active Learning Experiences*, (2000). Many useful activity examples are cited in this book. The description given below is not comprehensive, but intended to create a desire for more information. The following excerpt describes the criteria for productive play activities that yield significant conceptual growth:

- Investigative play tasks are open-ended. They do not lead students to "the answers."
- Play tasks call for the generation of ideas, rather than the recall of specific pieces of information.
- Play activities challenge students' thinking; indeed, they require thinking. Higher order mental challenges are built into each play task.
- Play activities are "messy." Children are, in fact, playing around.
- Play tasks focus on "big ideas"–the important concepts of the curriculum, rather than on trivial details.
- Each play task provides opportunities for children to grow in their conceptual understanding. When children carry out investigative play, they grow in their ability to understand larger concepts.
- Children are the players. They are actively involved in learning. They are talking to each other, sharing ideas, speculating, laughing, and getting excited about what they have found. They are not sitting quietly, passively, listening to the teacher's talking.
- Children are working together in learning groups. Play is enhanced through cooperative investigation. Cooperation rather than competitive individual work is stressed.

The strategy looks like this:

- Children are engaged in an activity which is designed to develop a bigger concept. For example, children may be challenged to observe a variety of seeds and plants. Open-ended questions such as "What can you find out about seeds?" are posed. The related "big idea" could be "living things grow and change."
- Children are brought together for a debriefing. Questions are directed at articulating the children's observations, ideas, and reasoning. Challenges are posed which go beyond the children's observations, such as "Where do seeds come from?" or "What makes seeds grow?"
- Children return to the materials with new focus questions for their investigation.

The strategy can be repeated as time and interest allow. Materials may be used again for a different set of focus questions. The materials are included in an exploration center for further investigations.

Plan-Do-Review

This strategy is a sequence which becomes part of the daily routine. As children carry out projects or investigations, they need time to anticipate what they will do, how they will proceed, and what materials they will use. Once the work session is over, they need time to reflect on how they did, what they will do next time, where they will store their project, and what they might want to do differently (Hohmann & Weikart, 1995).

For children to become responsible, independent learners, they must be provided the time and support to plan ahead and follow through. During planning time, children think about what they will do. Children may represent, describe, or otherwise indicate to another child or adult what their plan is. Review incorporates the same strategies, only in reverse, and may involve sharing products with another person.

Specific strategies for planning and reviewing include:

Modeling—As children are working, the teacher describes what they are doing. "I see you have planned to glue scraps of paper to the larger piece of paper. Will you tell us about your work at review time?"

Oral—Adults and children spend a few minutes before the work begins as each explains what they are going to do. By including where the work will be done and which materials will be needed to begin, children are better able to focus and begin independently.

Group-Adults and children plan together using chants, "mystery bags," classroom maps, chalkboard graphs of centers, or other group techniques. Each child has a turn to represent his or her plan within the larger group.

Written—Children represent their plans and reviews on paper. Adults may write dictation, children may draw and/or write, or there may be a planning form the child uses each day. Whatever the medium, a written plan provides a record of the child's work from day to day and is a valuable source of information.

Pantomime—Children act out their plan or review while others participate in pretending as well. Everyone is involved in imagining the action. This often results in motivating children to try some of the imagined work.

Project Planning

Projects as part of the primary program are highly recommended as a way to make sense of information in children's lives. Projects involve the investigation of a topic, but differ from *traditional* thematic units because they are fully integrated. In project planning, the disciplines are naturally combined; there is no need to provide distinctions or to weigh the number of "activities" in each discipline. The goal is to learn about something, using all the available resources, incorporating the skills, knowledge, and dispositions needed to accomplish that goal.

The project approach is firmly grounded in the principles and ideology of the Primary Program, and should be part of a balanced curriculum. The skills, knowledge, and dispositions acquired by formal instruction are better learned and remembered when applied in a real context. Using projects with children is an opportunity for application and consolidation of the learning we value (Katz & Chard, 2000).

The types of activities involved in a project reflect the principles of active learning. Children are decision-makers and planners throughout the process. The teacher leads and structures the project based on the children's ideas and contributions. "The project approach provides a context in which all aspects of children's minds can be engaged, challenged, and enriched" (Katz & Chard, 2000).

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Technology in the Primary Curriculum

Common Understandings

Children use language, investigative processes, and technology as their primary learning tools. Language tools include reading, writing, listening, and speaking. Investigative processes include problem-solving, reasoning, exploration, and interpretation. The tools of technology include not only computers but also a variety of hardware: printers, cameras, video recorders, cellular phones, scanners, and hand held devices along with appropriate software applications. Each technology tool, individually or in combinations, may be applied in a variety of purposeful settings that include both teacher-planned activities and activities initiated by children (Nebraska Department of Education, 1999).

Consider how children's multimedia journals might encourage emerging literacy skills. Children's storytelling might begin with artwork, either created directly on the computer or drawn with crayons and paper and then scanned into the system. A child could then narrate her story into the system using a microphone and play back the soundtrack, modifying it until it was satisfactory. Written text might be added to the system by either the teacher or the child and linked to the spoken words so that clicking a mouse on an individual word screen would call up the child's own voice. These "story files" could then be stored and shared with other children and parents. Telecommunications allow communicating the "story file" to grandparents on the other side of the world.

Adults must utilize their intellectual energy and creativity to advocate for appropriate uses of technology in the hands of young children. Teachers may then guide young children's natural curiosities with extended activities planned to promote authentic work and real world problem solving. Despite revolutionary advances in the field of educational computing, technology remains simply a tool. "Potentially powerful and stimulating, the computer is only an inert object that never can be a substitute for the personal touch of the classroom teacher" (McKenzie, 1998). How teachers use technology in their schools is critical. Without proper integration of these tools into the curriculum, the benefits of technology to foster children's learning cannot be fully achieved.

Jamie McKenzie (1998) states in an article for *The School Administrator* that teachers will welcome new technologies into daily use when schools pay attention to a few simple lessons.

- Make learning goals very clear
- Identify the classroom opportunities for integration of these tools
- Provide extended funding and commitment

- Emphasize robust staff development, adult learning, and the creation of a supportive culture
- Combine rich information with powerful tools
- Match rigorous program assessment to learning goals/standards and student indicators/benchmarks

McKenzie further explains how technology expectations are to be written into the curriculum guides. Every curriculum document should identify learning experiences and strategies, which require the use of new technologies. For example, "Language arts curriculum must state clearly that students in second grade right up through the end of high school will compose 10–15 papers annually using word processing software in combination with rich electronic information" (McKenzie, 1998). Social studies and science curriculums name the opportunities for analysis of data, global e-mail partnerships and investigations using electronic information. "It is not about training, it is about learning" (McKenzie, 1998). Teachers need to discover personally the power of the new technologies combined with rich information. They also need a support system in the form of mentors, coaches, or just-in-time help which often does more to promote risk taking and growth than formal class offerings.

The research of Rachel Cohen (1999) with young disadvantaged preschoolers in Paris, France shows that the learning potential of very young children is enhanced when the children have opportunities to interact with the computer and work in small groups. They were able to discover and build written language. But first we must give students basic skills to become efficient users of technology tools.

Cohen also offers suggestions for structured, relevant introductions, including lots of teacher guidance, and student opportunities to apply those skills to accomplish the content goals. A balance is always healthy when considering technology tools versus other learning tools. Selection is based on which tools make the work easier for each individual student. It is through our best collective efforts that research and design for interactive technology will offer valuable opportunities for young children's learning and development.

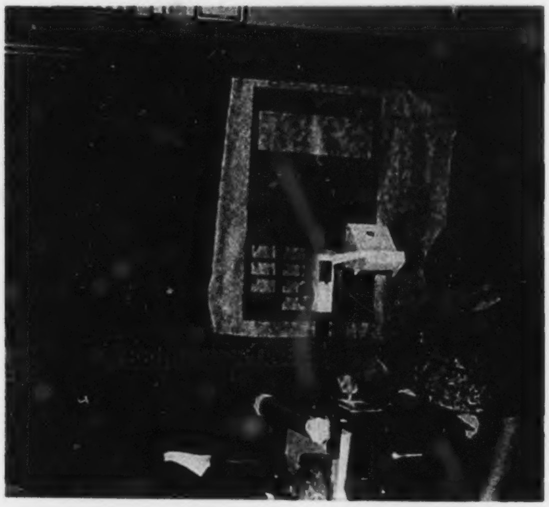
Equity of Access

Parent and active community participation in school planning processes provides a diverse perspective on meeting the needs of all students. It is only when equity of access to the tools of technology is addressed that all students can attain their highest potential. Ongoing, total-school assessment and evaluation, accomplished through the lens of the community allows the school to be strategic in budgeting, purchase, and staff development to support technology needs.

As school districts require student achievement to be measured against essential learning goals, teachers, administrators, parents and community must reach consensus on what is to be learned. These plans become the guidelines for preparing students to enter the next academic challenge or the world of work. When the essential learnings are used to generate quality standards and indicators / benchmarks, the gaps found between what we teach and what is learned becomes apparent. When priorities for meeting the needs of all students are established, budgeting for the acquisition of multiple tools of technology becomes one piece of the puzzle for improving schools and increasing student achievement.

Integrated Curriculum

Teacher use of technology tools in teaching models applications of technology to authentic tasks. Students involved in planning research will incorporate the use of technology when it is a part of the classroom environment and all share equal access regardless of their individual adaptive needs.



When technologies are integrated into the curriculum as vital elements of instruction to solve real problems dealing with important issues, children gain the ability to use them as natural tools for learning, just as they would a pencil, chalk, or paint brush (Shade & Watson, 1986). To maximize the potential of all tools of technology they need to be viewed on the same level with the other instruments of instruction.

One of the ways teachers plan for integrated curriculum, teaching, and learning is by pursuing projects inspired by children's interests and curiosity about the world around them. During these projects children build competence in identifying criteria for quality work, planning and carrying out activities in meaningful ways, and reflecting on work to evaluate learning.

Curriculum which is inquiry based and problem-solving focused is the basis for learning in the context of the child's world. When students learn based on what they already know about a subject and what they want to learn about that subject, and when they reflect on what they have learned by communicating that learning to others, authentic learning has been accomplished. Tasks have meaning for children when they are based on solving authentic problems which relate to real world issues. Students who function as explorers, researchers, engaged learners, and problem solvers make lasting meaning and achieve authentic learning.

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When children help set the goals for learning based on what they want to know, there is no question about clarity. Teachers then can incorporate the standards and benchmark/indicators of each subject area into that project. There is no reason the student should not know the expectations for learning as the planning develops. Students can contribute to planning activities for their learning as well as creating rubrics for a quality piece of work. In this students learn reflective practice, self assessment, and evaluation of processes and products.

Technology-powerful classrooms have been shown to have positive effects on the instructional process on basic and advanced skills. To be effective technology must become part of the whole educational environment. Studies have shown these kinds of gains made by students (Bialo & Sivin-Kachala 1996; Dwyer, 1994).

- Exploration and representation of information was expressed dynamically and in many forms
- Students interacted more socially when working in pairs
- Students communicated effectively about complex processes
- Students became independent learners and self-starters
- Students knew their areas of expertise and shared spontaneously
- Students used technology routinely and appropriately
- Writing skills increased
- A better understanding and broader view of math was obtained.
- Students gained an ability to teach others their new knowledge.
- Greater problem solving and critical thinking skills were obtained (Kosakowski, 1998).

Teachers are better able to assess whether new methods/strategies are making a difference for children when they observe or listen to children. Children have unique learning styles which must be addressed in multiple modes, and students also communicate knowledge in multiple ways. The tools of technology increase the opportunities for presentation of knowledge through modes most beneficial to the individual learner. Never before have the choices of demonstrating knowledge been so plentiful. Technology also can assist a teacher in recording information on teaching strategies, observations, student activities, social interactions, for district assessment.

Strategies and methods of teaching are enhanced through use of technology. For example, teachers can use multimedia presentation devices, video cameras, digital recorders, scanners, tape recorders, computers, or CD-ROM to present information, model its use for students, apply new knowledge, record observations, document learning, interpret results, self assess, report to parents, administrators, or the public, communicate with

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colleagues, or take a virtual visit around the globe. Students can be challenged to think and talk about which strategies helped them and ways they could use these same strategies to communicate their knowledge to others.

Equity requires that we rethink the way we look at and use the resources we have now. Some schools have for example redirected a major part of their textbook budget to purchase new technology. Today's CD-ROMs can replace some of the outdated printed materials, particularly reference materials or out-of-date textbooks. What are you willing to give up or trade for more technology dollars? Are the benefits grounded in solid philosophies about how children learn and the part technology plays in assisting them in forming higher-order thinking skills and problem solving versus accumulation of information, facts, and data without processes to determine usefulness and application. Young children learn so much from experiencing their environment we must be concerned about technology becoming the only source of information to the exclusion of meaningful experiences with persons, places, and things first hand.

Adaptive Needs and Accommodations

Some children have individual needs which require adaptive accommodations. Software and hardware allow the teacher to create customized, open-ended activities for individual learners. Customized boards, setups, and overlays can be made with text, sound and icons to help with communication, reading, and writing skills. Other areas which benefit from a customized adaptation might include: positive guidance, English Language Learners, daily living, and vocational skills. Teachers can get in touch with organizations in their areas to see what is being done. An Alliance for Technology Access (ATA) Center is a great starting point. This is a group of parents, consumers, and professionals who work to help children and adults with disabilities gain access to the benefits of adaptive technology. (Their web site is: http://www.ataccess.org)

Educational applications of technology to meet adaptive needs facilitate the following goals for children:

- Encourage movement for development of fine motor skills by use of input accommodations, for example, switches and touch screen
- Improve range of motion with specific response adaptations
- Train visual attending, gaze shift, tracking, scanning by use of specific software for visual impairment
- Develop auditory attending skills for hearing impaired students
- Develop receptive language skills for language delayed or English Language Learners
- Develop the ability to follow directions by use of both language versions of software
- Provide a means to use expressive language in composing and recording stories
- Discourage inappropriate behaviors by providing positive reinforcement
- Provide positive reinforcement for target behaviors by careful selection of software
- Provide opportunities for peer interaction and turn-taking
- Provide environmental control of computer use area to facilitate engaged learners

- Provide age-appropriate recreation / leisure activities through software selection
- Provide opportunities to learn and respond to specific content by use of accommodations in input or output devices

Example of Integrated Learning with Technology

When all of this information is merged, what does a technology-literate classroom look, sound, and feel like?

The following example is adapted from one described on the web site for *The Project Approach* (Gibson, 1999). It begins with the children's observation of an ant colony near the school which prompts lots of questions about ants and their activities. Encouraged by the children's natural curiosity with the following questions: "Why do ants travel in single file?" "What do ants eat?" "Do ants come from eggs?" "Why are they here now?" the teacher may responds with, "How could we study about ants?" Some responses might be:

- We could watch them.
- We could put food out for them.
- We could make an ant farm for them.
- We could watch a video about ants.
- We could look at books about ants.
- We could search the Internet about ants.
- We could find someone that knows a lot about ants.

These comments indicate a high level of interest and readiness to learn. The children use paper and pencil to record observations of the colony. Some children choose to draw pictures of what they see. Some want to take some ants inside for observation. Others want to move the whole colony inside. The investigation has begun! The teacher and associates record the conversations children are having during their observations of the colony. Children and adults talk about what is observed. Questions are asked. Each question raises more questions. After all questions are recorded on a chart, the team discusses ways to find the answers to their questions. During this process the teacher is planning ways to enrich the children knowledge.

Activities

- Purchase an ant farm for in the classroom observation
- Do a search on the Internet
- Take a virtual visit to the Smithsonian to see the types of ants that exist
- Observe outside and find the accurate name for the ants we see
- Use a software draw program to record observations
- Invite the park ranger in to talk about the ants we might find in the wooded area near the school, and invite him to go with us on a field trip to observe

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- Record the conversations the children have as they watch the ant farm in the room. "Why are they making tunnels?" "How can they carry such big pieces?" "Why is one ant bigger than the rest?"
- Photograph ant activity over time
- Take a field trip to the farm to observe ants at work in a different location
- Give a presentation to another class on what has been learned through their investigations
- Videotape their presentation to be shown to parents at conference time

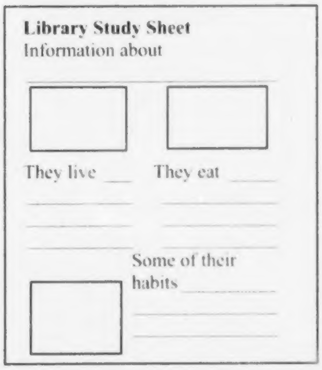
When children were asked how do we find out the answers to your questions, a multitude of possibilities became available. Together they decided to find answers to the following:

- How can we record what they do?
- If we put out food, what will they eat?
- Where will they take it?
- Will more ants come to help the others?
- Shall we leave the ants here or should we get rid of them?
- How do we show others what we have learned?

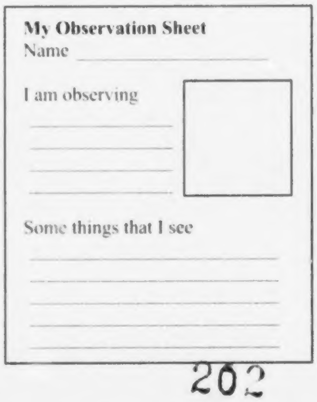
These tasks were investigated. Children recorded information by making drawings of what they saw. They then dictated to an adult what they saw happening. Together a chart was made to show which foods were favorites of the ants, where they took the food, and how they worked together as a team. A book titled "If You Were an Ant" by S.G. Calder was read and reread to the children.

The teacher reminds the child of techniques already taught for recording ideas and information:

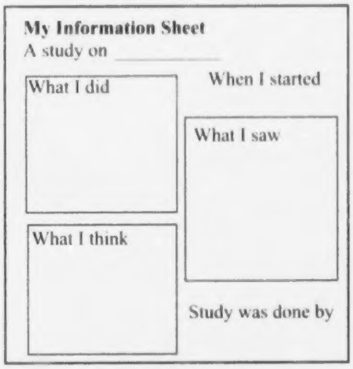
- Making a list
- Web
- Draw and label
- Take notes
- Collect key words
- Use headings
- Photos and video
- Models
- Data collection sheets



Library Study Sheet
Information about
They live
They eat
Some of their habits



My Observation Sheet
Name
I am observing
Some things that I see



My Information Sheet
A study on
What I did
When I started
What I saw
What I think
Study was done by

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The child began the study by using some of the above techniques. Pencil and paper were taken outside to make drawings and take notes. Children lie down in the tall grass outside to try to see things from an ant's perspective. A magnifying glass and microscope aided in detailed drawings. Some drawings were done with crayon and some were drawn in *Kid Pix*. The media specialist helped locate books, CD-ROMs, laser discs and video. A chart was made to show which foods the ants took from the variety offered. The child continued the study at home, involving the family in discussions about what happens when ants come inside the house, and safe ways to get rid of them. The family found additional materials at the public library, and decided to purchase a book at the bookstore for the family library.

They made ant antenna to wear on their heads as they marched to the song "Ants go marching." A short video clip from the NOVA network was shown called "Little Creatures Who Run the World." Children talked about what life would be like as an ant, some dictated stories into the computer to listen to themselves reading it back. More questions kept arising during their work. Why do people poison ants? Are ants good for anything? Do they drink water?

Children became great interviewers of the park ranger. They E-mailed an expert at the Smithsonian with their questions about their specific ants. They still had not answered the question about leaving the ants or poisoning them. They constructed ants from Styrofoam and pipe cleaners. The science teacher provided a microscope for improving detailed observations. Rich drawings and conversations brought forth more knowledge. The magnifying glasses were then taken out to the ant hill as well as used on the ant farm in the classroom. One parent invited the class to come to the farm to visit a huge ant colony. The kindergarten class then invited the first graders to visit and share the information they had gathered. Each child had dictated a story about what he/she knew about ants before and what he/she knows about ants now. Some students shared their drawings and talked about what it would be like to be an ant. One student with a communication delay took a first grader by the hand and escorted him to the ant farm and handed him the magnifying glass and then took him to the microscope. The first graders had been reading "The Ant and the Grasshopper." When they returned to their room they asked their teacher if they could make a puppet show for the kindergarten students.

After much discussion with the park ranger and the expert at the Smithsonian, the decision was made by the group to let the ants stay where they were. They were not harmful and the poison was dangerous to the environment in many ways.

Parents came for conferences in a week and the children are asked to add a piece of their work to their portfolio that showed how much they had learned about ants, they then described for the parent why they selected that particular piece of work. Children created a rubric for looking at quality in their work or personal reflection. Discovery and literacy development in science, social studies, language arts, mathematics, communication, social skills, self assessment, reflection, and technology, took place during this integrated project.

Activities to balance the project:

- Teacher-created learning centers which are engaging and related to the study
- Children having ample opportunities for free play
- Multiple tools of technology available
- The computer being used to make signs and banners for the dramatic-play area
- A matching game in the fine-motor center providing the concrete understanding for how to use the computer matching game
- Extensions of learning before, during and after the use of technology
- A balance of hands-on, minds-on, engaged learning activities with technology
- A plentiful supply of activities for engaged learning that do not use technology

At the conclusion of any study, it is important for the child to have an opportunity to share the study with others, for example, a teacher, classmate, administrator, another class. Ways of communicating what has been learned may include:

- A *HyperStudio* presentation
- An oral report illustrated with drawings, charts, and models
- Reading a book the child wrote or dictated and illustrated

Hardware and Software

Computers and other equipment for learning need to be in the classroom as opposed to isolated in a hallway or specific room away from everyday activities. Children need to be able to choose the use of such technological tools based upon the work they have to accomplish. When these tools are isolated in laboratory settings for special purposes their impact is minimized. Their use becomes a separate, unrelated subject called "Computer Literacy". There are multiple ways of using technology within the classroom which direct the type of technology needed. For example, if a computer is to be used in a center for literacy development using Discis books a machine with a CD-ROM is applicable. A classroom may not need every computer hooked up for the Internet if the main use is to be research for group projects. Printers can be shared with a modular grouping of machines. Learning goals should be considered in the selection of hardware and software.

Open-ended software can encourage children to articulate decision making and planning which leads to greater verbal interactions with others (Forman, 1994). Interactive software enhances the decision-making process, extends math exploration, problem solving, social interactions, collaboration and perspective formation. Some software labeled "integrated learning" may be only a cluster of activities related to a subject area without consideration for development of concepts and goals. Teachers need time to explore, practice with, and plan for the uses of software in relation to the established goals for learning. Interactive technologies become powerful tools when they are used to create multi-media presentations by students or teachers.

Consider

- Does the software assist students in achievement of high standards within the curriculum?
- Does the software use pictures and spoken instructions rather than written ones so that children can work independently?
- Are children able to control the level of difficulty, the pace, and the direction of the program?
- Is the software created to engage the learner in authentic work for real world application?
- Does the software have a number of different topics at varying levels?
- Do the children get quick feedback so they retain interest?
- Does the program utilize the capacities of today's computers by appealing to children with sights and sound?
- Has the software been previewed or have children been observed using it elsewhere to determine the level of difficulty?
- Are children encouraged to use their imagination and sense of humor?
- Are the children experiencing success and feelings of empowerment?
- In the selection of programs with an element of games, have creative ways been sought to increase the acceptance, popularity, and availability of games that are pro-social, educational, lack stereotypes or violence, and are fun.
- Is the software suitable for this particular student's learning style and needs?
- Is appropriate software available to assist in recording and reporting student progress over time?
- Are there software management programs for teachers and administrators which facilitates the recording and reporting of information to parents and community?
- Are there software selection guidelines or instruments available to assist teachers in making selections?
- Are there publications available which evaluate software selection for young children on a monthly basis?

Internet

Early childhood educators at all levels have begun to use the Internet to communicate and share information. Research suggests that use of electronic networking can help teachers reduce their sense of isolation, connect with peers, and increase their sense of professionalism and autonomy (Honey & Henriquez, 1993). By integrating Internet use into early childhood teacher education programs, teacher educators enhance the experiences of their students and prepare them to be active participants in the global community. By modeling the use of the Internet as a source of learning for the teacher, students encounter technology being used for authentic work.

Safety

Teachers can enhance student success with the Internet by using the following guidelines:

- Adult supervision and close monitoring of young children assures work remains healthy and productive.
- All students need a purpose for their exploration of the Internet. Bookmarks for appropriate sites will facilitate the search.
- Use child-friendly search engines like Yahooligans, KidsClick, and Ask Jeeves for Kids
- Instruct children in etiquette and vocabulary for the Internet.
- Instruct children to never give their home addresses, telephone numbers, or names without permission from parent or teacher. This would include the name of their school or child care setting.
- Instruct children to never send a photograph to someone you meet on the Internet without permission from parent/teacher.
- Instruct children to never agree to get together in-person with someone you meet on the Internet without permission from parent.
- Limit the amount and time of day children are allowed online. Bookmark favorite sites for appropriate exploration.
- Instruct children to tell you if they receive an inappropriate message or material that is uncomfortable to them.
- Invest in software that provides protection from material which is offensive. Internet service providers may already have systems in place.
- Equipment placed in the area where other class members are present promotes interaction
- Become a side by side co-learner with the student.
- Teachers need an awareness of access to web sites created for the visual and hearing impaired learners as well as adaptive devices for children with other physical, mental, or learning disabilities.
- Instruct children in how to assess quality and accuracy of information.
- Get to know the persons your children are interacting with on the Internet to facilitate positive communications and reduce potential risks.

Districts should consider:

- Fire walls for the school network
- Internet screening software filters for installation on individual machines that provide for screening by location site or URL, by key words, or by use of limiting search engine software

Internet access and use brings further discussions about what is needed to assist students in meeting the essential learnings. Districts become charged with establishing acceptable use policies for maintaining the safety of students. Acceptable use policies should be adopted by the school and community. Instruction in this policy can then be provided for staff, students, parents, and community. By providing continuity in all environments where young children encounter Internet access educators are better able to plan for their safety.

Implications for Future Research:

Advances in computers, communication, and other information technologies have the potential to transform how teachers teach and students learn. Coupled with an improved understanding of brain development in the early years and learning, technology has the potential to improve the quality of education and training available to Americans of all ages (Griffin, 1999).

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Widely-Held Expectations: Developing and Integrating Dispositions, Skills, and Knowledge

Learning experiences in the primary years should lead to the development of dispositions, skills, and knowledge relevant to all curriculum areas. The teacher helps children see the relationships that exist among these learning dimensions (dispositions, skills, and knowledge) and across all curriculum areas. In this way, understanding develops as a meaningful whole rather than in fragmented, isolated pieces. When children recognize the connections, relationships, and commonalties to be found within the learning dimensions of each curriculum area, they are then able to transfer and apply this learning to new situations. In primary classrooms, the integrated nature of learning is emphasized as children participate in meaningful, developmentally appropriate learning experiences related to topics of interest and relevance to young learners.

Becoming an Independent, Lifelong Learner

In order to deal effectively with our challenging and changing world, children need to develop strategies that will help them find solutions for the increasingly complex problems they will face in the 21st century.

While a rich and varied content base is necessary for young learners, even more critical is the ability to access, evaluate, organize, and use information effectively. The primary program offers opportunities for children to:

- Access, select, and make use of information from a variety of sources
- Assess which information is significant and relevant
- Organize information for effective communication

Successful learners view themselves as successful problem-solvers. They enjoy solving problems, both independently and in collaboration with others. The independent learner can both cooperate and collaborate recognizing that learning is both an individual and a social process.

Activities and experiences which have value and relevance in the classroom and to the world beyond school are fundamental for children to become self-directed, to think divergently, and to apply problem-solving strategies. This increased sense of self-direction and growth in autonomy enables children to approach new learning with enjoyment, confidence, and satisfaction allowing them to embrace all that life has to offer and to see the potential of each new experience.

Linking to Standards

This is the context in which we must approach reaching for high standards for all children. State or local standards, now the rule rather than the exception in schools across the nation, must never be applied in ways that cause any young child to experience repeated failure. Responsible practitioners ensure that expectations remain high, but that teaching practices adapt to the range of capacities of young learners, so that repeated success leads each one toward higher and higher achievement.

Appropriate practice is about **how** children learn and how highly competent teachers teach. Standards are the target. One does not abandon good practice to lead children toward the achievement of high standards. In fact, to do so would result in the opposite outcome. Failure is the antithesis of achieving high standards. Young primary age children are especially vulnerable to negative long term consequences when they experience repeated failure in the school environment.

Effective programs provide learning activities which extend well above and below the general expectations for children in that chronological age range and provide a range of options in terms of learning styles. Through careful observation and monitoring of children's current developmental levels and through effective criterion assessment, children are encouraged to select/participate in ever more challenging learning materials and intellectually stimulating projects. Indeed, the only way to assure that a group of children will achieve a common set of standards is to employ a wide range of instructional strategies.

> *When we teach skills to children too early, too formally and out of context, they will learn them without the desire to ever use them.*
>
> Katz, 1992

Widely-Held Expectations

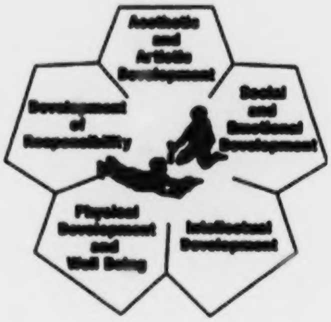
What Are Widely-Held Expectations?

Widely-Held Expectations are generalizations about children's development and learning over time. They are frames of reference that help parents and teachers focus on the development of the individual child. These are not expectations for all children but are general statements that show common patterns of development over time. They are based on expert knowledge, current research, observation of children, and the collective wisdom and common sense of parents and teachers.

Infants around the end of their first year are generally able to smile, sit up, eat solid foods, vocalize, understand and perhaps say a few words, and be on the way to taking that first step. Of course, these expectations are only generalizations—true for some infants, not for others.

Taken individually, none of these Widely-Held Expectations is particularly significant. After all, some infants never crawl before they walk, others don't say a word until one day in their own time and in their own way, they launch their first speech in complete sentences.

Nevertheless, these Widely-Held Expectations are useful generalizations, providing telling snapshots or graphic profiles. Taken together, they may say something important, show a pattern, or raise a question about the developing learner.


Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

The Widely-Held Expectations in this document are divided among the five goals of the primary program, and in the areas of reading, writing, and mathematics. They have been organized for clarity and easy reference according to a time frame of birth through 13 years. However, when using the Widely-Held Expectations, the interest is learner-focused, so we begin where the child is developmentally, no matter what the age.

Widely-Held Expectations...
- Provide the big picture of children's growth and development over time
- Form the basis of the concept of continuous learning
- Help parents and teachers focus on the development of individual children
- Help teachers assess individual learners and plan appropriate learning experiences that ensure continuous progress
- Serve as a reference for parents for reassurance about their child's on-going development
- Can be used for reference by parents in providing developmentally appropriate toys, reading materials, and other opportunities for their children

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As parents and teachers use the Widely-Held Expectations, they will begin to develop a picture of a child's progress in relation to the general development of other children of a similar age. When looking at the charts on the following pages, you might want to:

- ✓ Look at all goal areas to gain a balanced view.
- ✓ Look at the age ranges on either side of the child's age to appreciate growth over time.
- ✓ Remember each child is an individual and will shine more brightly in some areas.
- ✓ Use this resource as a starting point and one way of viewing development over time.
- ✓ Consider the experiences that home and school have provided.
- ✓ Be patient—learning is a lifelong process.

Regardless of whether teachers are thinking in terms of programs, learning goals, planned activities, curriculum areas (subjects), or state standards, the child must always be the first consideration.

When considering the developing learner, teachers take into account the child's

- Sense of security in social settings
- Family relationships
- Needs
- Previous experiences
- Age
- Health
- Interests
- Feelings
- Learning rates and styles
- Abilities
- Dispositions, skills, knowledge

In planning experiences at the primary level, the teacher thinks about:

- How children learn best
- What learning is appropriate
- When it is best learned

The Primary Program is organized around the five goals so teachers can plan experiences that meet the needs of the whole child. In school, when curriculum, assessment, and evaluation take these factors into consideration, the program is developmentally appropriate.

For the Widely-Held Expectations described on the following pages, the statements and examples of children's development provide only a sample of generally observable behaviors. Parents and teachers will likely think of many other similar examples.

Given that a child has had both home and school opportunities to develop in each goal area, the following Widely-Held Expectations may apply to the child's development.

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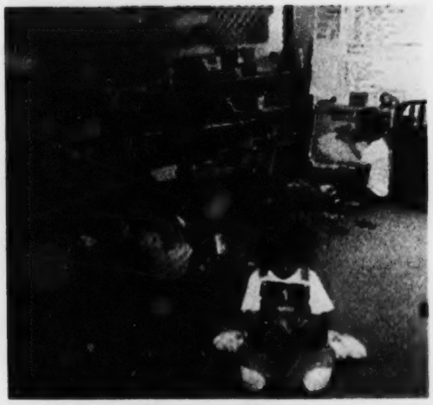
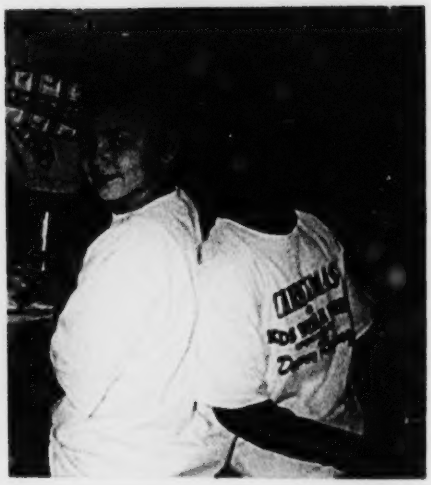




Growing and Learning in the Heartland

Widely-Held Expectations in Aesthetic and Artistic Development

Birth–3 years	3–5 years	5–7 years
Music and Dance ▪ May look at, talk to (babble), grasp, bang, or drop toys ▪ May begin to express pleasure or displeasure (laughing, anxiety) when listening to sounds, voices, and music ▪ May make sounds to music without using words ("la, la" or "ba, ba"), may enjoy hearing own sounds ▪ May begin to move body to sounds and music	*Music and Dance* ▪ Use movements that are generally spontaneous, unrehearsed, and inventive ▪ May respond to music, art, and nature through body movement that is rhythmic, e.g., rocking, clapping, jumping, or shaking ▪ May use both a speaking voice and a singing voice when singing alone, with a tape or with others, and may or may not be able to sing a melody in tune ▪ May be relatively uninhibited about singing and playing musical instruments	*Music and Dance* ▪ Often continue to be relatively uninhibited about singing and playing musical instruments ▪ Continue to expand and refine responses to a variety of sounds, voices, and music ▪ Are developing a singing voice, but the range will differ; may or may not be able to sing a melody in tune ▪ Are increasingly able to initiate and repeat movement patterns (walk like a lion, slither like a snake) ▪ May show imaginative and creative ways of moving and dancing
Drawing ▪ May try to grasp writing tools with whole hand ▪ May draw randomly and look away while drawing or making marks on paper or board ▪ May begin to make scribbles for pleasure of seeing the results of their actions ▪ Use scribbles, lines, and circles for expression	*Drawing* ▪ May learn to hold writing tools between fingers and thumb ▪ Gradually try making lines and circles repeatedly and with more control ▪ May make marks, draw, paint, and build spontaneously to express self ▪ May begin to name a person, place, thing, or an action in a drawing	*Drawing* ▪ Continue to develop the ability to hold and use large size writing and drawing tools ▪ Continue to name what has been drawn, painted, or constructed ▪ May show first attempts at drawing, painting, and building "things" ▪ Gradually include more detail and add more body parts when drawing people ▪ May strive for more detail and realism in artwork
Drama ▪ May enjoy pretend games	*Drama* ▪ Often engage in pretend play easily and naturally ▪ May talk to and play with pretend friends, television characters, stuffed and other toys	*Drama* ▪ Often continue to show lots of imagination and interest in make-believe ▪ Continue to talk to imaginary friends; may greet an imaginary friend or call someone with a striking sense of reality

Widely-Held Expectations in Aesthetic and Artistic Development

7–9 years	9–11 years	11–13 years
Music and Dance ▪ May begin to sing in tune and contribute to musical activities ▪ Like to express ideas and feelings through music and movement ▪ Expand and refine responses to and express personal preferences for a variety of sounds, voice, and music ▪ May become better at interpreting musical sounds as being low, high, or related to certain instruments ▪ Continue to initiate and repeat movement patterns; may like to move or dance in front of a mirror ▪ May begin to show more redefined movements as coordination develops	*Music and Dance* ▪ Continue to expand and refine responses to sounds, voice, and music; are becoming aware of cultural characteristics and of personal preferences of friends ▪ May become somewhat inhibited in music and movement; may show interest in own musical activities such as lip-synch, band, and mime ▪ Continue to develop their sense of coordination, may continue to increase ability to interpret, produce, and reproduce musical sounds	*Music and Dance* ▪ May begin to develop particular choices in sounds, voice, and music ▪ May continue to interpret and produce musical sounds if encouraged and supported to do so ▪ Are developing more control over singing voice and breathing; may show interest in joining a group activity such as band, chorus, or musical production, often with friends ▪ May seem self-conscious at efforts to move or dance and may appear somewhat awkward or uncoordinated because of rapid physical growth
Drawing ▪ May continue to develop and refine their ability to use a variety of writing and drawing tools ▪ Increasingly develop forms, such as a human form, and repeat them over and over ▪ May begin to show interest in making their artwork realistic	*Drawing* ▪ May begin to show interest in developing a skill; may want to know "how" to use a tool to create a special effect ▪ May become very self-critical of own work (may want hair to "look like" hair) ▪ May want and need to see the object or scene as they are drawing and want to make artwork an exact copy of reality	*Drawing* ▪ Continue to explore and refine use of various tools to create special effects in artwork ▪ May begin to show an interest in perspective or drawing according to scale or to create similar effects ▪ May focus on the whole effect of a picture or on detail work ▪ May appear to have little confidence and become self-critical of own artwork
Drama ▪ May play the part of a parent or significant other (when playing house or school) and may show signs of cooperative play ▪ Often continue to show their imagination through make-believe or with a variety of props ▪ May "act out" stories spontaneously	*Drama* ▪ Continue to engage in make-believe and often have a vivid imagination ▪ Generally like to play and perform, but may prefer playing in groups rather than alone ▪ May continue to show an interest in making up and performing their own plays	*Drama* ▪ May want to play but at times feel this is no longer proper to "grownup" ▪ May continue to develop imagination and may be less willing to share ideas publicly

Widely-Held Expectations in Social and Emotional Development

Birth–3 years	3–5 years	5–7 years
▪ May demonstrate visible expressions of emotion (temper tantrums) ▪ Actively show affection for familiar people ▪ May show anxiety when separated from familiar people and places ▪ Are naturally very curious about other children and may watch and imitate others ▪ Generally play alone; may or may not attempt to interact with others ▪ Strive toward independence with support and affection (sitting up, crawling, walking, dressing, feeding, toileting) ▪ Begin to see themselves as people and appear self-centered ▪ Begin to see themselves as strong through directing others: "sit down" ▪ May become possessive of belongings (special people, toys, special times)	▪ May display their emotions easily and appear very sensitive and impulsive (crying fits, "No!") ▪ Begin to feel more comfortable when separated from familiar people, places, and things (visiting a neighbor, nursery school, baby-sitter) ▪ May play alone or beside others but are becoming more aware of the feelings of others. May be frustrated at attempts to socialize but hold no grudges. ▪ Begin to assert independence by saying "No" or "I can do it myself!" May dump a cupful of water onto the floor while looking directly at you ▪ See selves as family members and as boy or girl in the family ▪ See themselves as powerful and creative doers. (If the child can't reach something, he or she will get a stool) ▪ May continue to appear possessive ▪ May feel if something is shared for a brief period, it is gone forever	▪ May continue to show intense emotions (one moment will say, "I love you" and the next "You are mean.") ▪ May appear anxious once again when separated from familiar people and places (beginning school, sleep-overs) ▪ Are learning to cooperate with others for longer periods of time; friendships may change frequently ▪ Continue to develop feelings of independence by becoming able to do certain things (making a simple breakfast or riding a bicycle) ▪ May begin to talk about self and to define self in terms of what they have or own ▪ May feel they are being treated unfairly if other get something they do not ▪ Begin to see themselves as bad, good, clever, and may seem very hard on themselves ▪ Begin to develop the ability to share possessions and take turns

Widely-Held Expectations in Social and Emotional Development

7–9 years	9–11 years	11–13 years
▪ May continue to show bursts of emotion and impatience less frequently ▪ May show emotions that are both judgmental and critical of themselves and others ▪ Continue to feel some anxiety within the larger community when separated from familiar people, places, things (going to camp, sleep-overs, shopping malls) ▪ Are becoming more outgoing ▪ Are developing closer friendships with others; may begin to play mainly with children of the same sex ▪ Show a generally increased sense of self-confidence ▪ Will eagerly take on tasks and activities likely to be successful but usually will not take risks ▪ May define self as a particular name, age, size, hair color, or other characteristic ("I'm Elizabeth Anne, and I'm seven years old!") ▪ Are sensitive to criticism and display feelings of success or failure depending on how adults respond to them ▪ Continue to develop the ability to share possessions and to take turns if they understand something is not always "lost" by doing so	▪ May appear relatively calm and at peace with themselves and occasionally become angry, sad, or depressed, but these moments are usually short-lived ▪ Often hide feelings of anxiety when introduced to new experiences by appearing overconfident ▪ Continue to be very sociable and spend time with parents, friends or the same sex, and often have a "special" friend ▪ Are generally positive about themselves and begin to understand what they are good at doing; may comment easily, "I can do that" or "I can't do that" ▪ Often define self by physical characteristics and possessions as well as likes and dislikes ▪ Often vary between the sexes in their view of what is important in dress and physical appearance ▪ Are sensitive to criticism and display feelings of success or failure, depending on how adults and peers respond to them ▪ Continue to develop the ability to work and play with others ▪ May not want to be disturbed when involved in an activity or game	▪ May begin to show intense emotions, bouts of anxiety, moodiness. Emotions may come close to the surface (cry and anger easily) ▪ Continue to hide feelings of anxiety with friends and family, often appearing overconfident with a know-it-all attitude ▪ Generally get along well with their friends and continue to show an interest in having a "best" friend; fights and arguments may occur from time to time ▪ Start to question adult authority ▪ Sometimes engage in self put-downs; in conversations with others may say, "I can't do anything right!" ▪ May begin to define self in terms of opinions, beliefs, values, and expand sense of self by attempting to copy the culture of current fads (clothes, music, sports) ▪ Gradually gaining independence from parental influence ▪ Are sensitive to criticism and display feelings of success or failure ▪ May become self-critical ▪ May appear to become possessive with own belongings, especially with younger brothers and sisters ▪ May view younger siblings as nuisances when involved with peers and feel discriminated against in family situations

Widely-Held Expectations in Intellectual Development

Birth–3 years	3–5 years	5–7 years
▪ Make direct contact with their environment to the best of their ability—doing, seeing, hearing, tasting, touching, and smelling (Put objects in their mouth) ▪ Are beginning to develop an understanding of language and how it works (imitating sounds, saying words, putting words together) ▪ Are learning to name objects and may use the same word for two or more objects (all vehicles called "cars") ▪ Express themselves through scribbles, lines, and circles ▪ "Read" pictures for meaning; begin to recognize that writing has meaning (writing is intended for communication) ▪ Are likely to think about time in the "here and now" ▪ Are increasingly able to identify familiar faces, toys, places, and activities ▪ Are developing personal choice (a favorite blanket or toy) ▪ May be interested in grouping objects (putting all the large animals to bed and leaving the small ones to play)	▪ Continue to explore the world around them by object manipulation and direct experience (playing) ▪ Begin to understand cause and effect ("I fell, I cried, I hurt") ▪ Begin to use language to name objects and their own direct experience of them ("stove-hot") ▪ Name objects and may find two objects are alike in some way (cats and dogs are animals) ▪ Are developing a sense of how writing and reading work ▪ Combine drawing and "writing"—drawing conveys most of meaning ▪ Play at reading—"read" pictures (telling story from pictures) ▪ Begin to read commercial and traffic signs (STOP) ▪ Continue to develop an understanding that writing conveys a message ▪ May think of tomorrow as "after my sleep" and use words like "tomorrow" and "yesterday" though not always correctly ▪ May learn nursery rhymes, songs, and addresses, but without really trying to remember ▪ Begin to assert personal choice in decision-making ("No broccoli!") ▪ Are developing an interest in the number of things ▪ Are increasingly interested in counting although the number may not match the number of objects	▪ Continue to learn from direct experience (playing) ▪ Expand and refine knowledge with increasing understanding of cause and effect ("I can go to my friend's house if I call home when I get there.") ▪ Continue to expand their understanding and use of language to clarify thinking and learning ▪ Are continuing to develop a sense of how writing and reading work ▪ Combine drawing and writing to convey ideas ▪ Understand that print "tells" the story ▪ Develop a basic vocabulary of personal words ▪ Read slowly and deliberately ▪ Will substitute words that make sense when reading ▪ Developing an understanding of words like "tomorrow;" may still be unsure about length of time ("Is it ready?" or "Are we there yet?") ▪ May begin to organize information to remember it (own telephone number, sound-symbol relations) ▪ Continue to assert personal choice in decision-making (what to wear to school) ▪ Begin to understand that the number of objects does not change when grouped in different ways ▪ Are developing the ability to match counting 1, 2, 3 with number of objects

Widely-Held Expectations in Intellectual Development

7–9 years	9–11 years	11–13 years
• May begin to do multi-step problems using objects to manipulate and count (blocks, fingers, buttons) • Continue to deepen understanding of cause and effect ("If I don't go right home after school, my parents will worry.") • Continue to expand their understanding and use of language to clarify thinking and learning • May work with simple metaphors ("My horse runs like the wind.") • Begin using writing and reading for specific purposes • Combine drawing and writing; writing can stand alone to convey meaning • Develop a rapidly increasing vocabulary of sight words • Begin to self-correct errors • Develop the ability to read silently • Increase ability to read aloud fluently with expression • May be learning to tell time and becoming more adept at understanding the meaning of "before," "soon," "later" • Are increasingly able to organize and rehearse information in order to remember, but may still forget • Continue to develop a need for increased ownership in decision-making (games, projects)	• Continue to use direct experience, objects, and visual aids to help understanding • Continue to expand and deepen understanding of cause and effect ("I can have a pet, if I take care of it.") • Continue to broaden understanding of language and its use to clarify thinking and learning • May begin to use puns ("A cow is a lawn mooer.") • Can expand thinking more readily through writing and reading • Increase reading vocabulary • Continue to self-correct errors • Read silently with increased speed and comprehension (Silent reading speed greater than oral speed may result in oral reading difficulties) • Adjust reading rate to suit purpose (scanning) • Expand reading skills to gather information from a variety of sources • Make personal choices in reading for pleasure • Continue to develop understanding of time-year in terms of important events—but may forget dates and responsibilities • Continue to develop the ability to purposefully organize and remember information • Continue to need increased ownership in decision-making (clothing, friends, activities)	• Begin to develop ability to "manipulate" thoughts and ideas but still need hands-on experiences • Do some abstract reasoning • Refine understanding of cause and effect ("If I do, I can't go outside.") • Continue to broaden knowledge, understanding, and use of language to clarify thinking and learning • Often like jokes and words with double meanings • Continue to expand thinking more readily through writing and reading • Continue to increase silent reading rate and time spent at reading • Continue to increase ability to adjust rate and reading to suit purpose (skim, scan, select, study) • Continue to broaden their interests in a variety of fiction and non-fiction • Begin to understand people may interpret same material in different ways • May be able to talk about recent events, plan for the future and career aspirations • May begin to develop more complex schemes to aid memory • Need ownership in decision-making with the continued guidance of a responsible person • Develop ideas about real objects and their properties—length, area, mass, capacity, and volume—through direct experiences and by thinking about those experiences

Widely-Held Expectations in Physical Development

Birth–3 years	3–5 years	5–7 years
• May experience a period of extremely rapid growth • Develop the ability to move about and to manipulate objects to the best of their ability • Begin to develop vision following slowly moving objects with their eyes • Begin to develop hand-eye coordination—reaching, grasping, objects, feeding, dressing • Begin to recognize concepts of place and direction—up, down, in • Begin to move about—sit, stand, crawl, walk, climb stairs, walk backwards—to the best of their ability • Are beginning to identify their own body parts, often through nursery rhymes and games • Are unaware of physical strength and limitations so may attempt activities that could be difficult or dangerous • May often change activities • Will move about at own pace, always near a trusted adult • Are likely to play alone or beside another • Begin to play games like peek-a-boo and hide-and-seek	• Are experiencing a period of rapid growth • Have a slower rate of small muscle development (hands) than growth and coordination of large muscles (legs) • Are usually naturally far-sighted • Continue to develop hand-eye coordination and a preference for left or right handedness • Begin to understand and use concepts of place and direction—up, down, under, beside • Are developing the ability to climb, balance, run, gallop, jump, push and pull, and take stairs one at a time • Are beginning to identify body parts and words used in movement—jump, save, hop • Seem unaware of their own physical strengths and limitations and may try potentially difficult or dangerous activities • May change activities often, although sometimes concentrate on one thing for a long time if interested • Are beginning to take part in group situations, but still play side-by-side rather than "with" others	• May or may not experience a slower rate of physical growth. Large muscles (legs and arms) may be more developed than small muscles (hands and feet) • May increase fine motor skills (handling writing tools, using scissors) • Usually continue to show far-sightedness • Continue to develop hand-eye coordination. A preference for left or right-handedness may still be developing. • Continue to develop an understanding of direction and place although may confuse right and left, up and down when playing games • Continue to develop climbing, balancing, running, galloping, and jumping abilities. May have trouble skipping. • Are growing in their ability to know what and where their body parts are, and how they can be moved and coordinated • Continue vigorous activity, tiring easily, recovering quickly • Tire from sitting rather than running • Develop an awareness of safety with guidance • Usually show enthusiasm for most physical activities and are sometimes called noisy or aggressive • Are developing the ability to take part in small group games, and usually begin to play in groups of children of the same sex

Widely-Held Expectations in Physical Development

7–9 years	9–11 years	11–13 years
▪ Continue to refine fine motor development and may have slower rate of physical growth ▪ May experience some visual difficulties (eye testing and corrective lenses) ▪ Are continuing to develop hand-eye coordination, and may accomplish more complex tasks ▪ Are developing ability to coordinate left and right sides by showing a preference for batting, kicking, or throwing with one side or the other ▪ Are gradually increasing in speed and accuracy during running, climbing, throwing, kicking, and catching activities ▪ Are continuing to understand body parts and uses ▪ Are beginning to understand basic ideas of nutrition ▪ May show more daring, exploring behavior that could lead to accidents ▪ Show times of high energy; become easily tired ▪ Continue to develop awareness of safety with guidance ▪ Continue to show enthusiasm for most physical activities ▪ May be interested in playing in groups although the group and the activity probably change often	▪ May experience a spurt of growth before puberty ▪ May experience some visual difficulties (eye testing and corrective lenses) ▪ Are continuing to develop hand-eye coordination, and skill level for physical activities may depend on this increase in coordination ▪ Are continuing to develop ability to use either the right side or left side for batting, kicking, or throwing ▪ Show increased coordination, but growth spurts may begin to interfere ▪ Develop the ability to hit a ball (softball bat, tennis racquet, golf club) ▪ Are developing a more sophisticated understanding of body parts and function as well as basic ideas of nutrition and growth ▪ Are beginning to develop the ability to pace themselves during high energy activities ▪ Understand safety rules but sometimes take risks ▪ May begin to show a preference for some physical activities over others ▪ May appear to enjoy more complex group games and simple sports ▪ May show a strong sense of loyalty to a group or team	▪ May experience rapid and uneven growth but this occurs at different rates for individual children; arms and legs may grow rapidly. ▪ May continue to experience changes to eyesight ▪ Continue to develop and refine hand-eye skills and integrate them with whole body efforts in sports and games ▪ Continue to refine right/left preference, and may show increasing strength with one hand/arm/foot ▪ May show periods of relatively poor coordination and awkwardness; may show some poor posture because of rapid growth ▪ May continue to develop more sophisticated and understanding of body parts and functions and begin to get the idea of a simple body system ▪ Continue to enjoy sports and group games ▪ Learn more complex body movements ▪ Continue to develop the ability to pace themselves during high energy activities ▪ Understand safety rules but sometimes takes risks ▪ Often vary between the sexes in their interest in physical activities ▪ Continue to play in same-sex groups, often engage in more formal team activities, and continue to show great loyalty to group or team

Widely-Held Expectations in Development of Responsibility

Birth–3 years	3–5 years	5–7 years
▪ Appear insensitive to the views of others, yet show interest in them ▪ Are generally self-centered in their views ▪ Look at the world mostly from their own viewpoint (may think the sun sets because they go to bed) ▪ May cry when they see or hear another child crying ▪ Physically explore the environment to the best of their abilities using their senses (seeing, hearing, tasting, smelling, and feeling) ▪ Are natural explorers, eager for new experiences ▪ Are beginning to distinguish between familiar and unfamiliar faces ▪ Are becoming aware of their own feelings and respond to others' expressions (become upset if caregiver is also upset) ▪ Begin to recognize consequences follow actions	▪ Are becoming aware of others and beginning to take part in social play groups ▪ May play "beside" rather then "with" others ▪ Are beginning to see that their views differ from those of others but remain self-centered ▪ May show aggressive feelings toward others when something does not go their way ▪ Are beginning to sense when another person is sad, angry, happy ▪ Become interested in exploring the environment outside the immediate home; may be interested in growing seeds, weather, seasons, the moon, and sun ▪ Continue to eagerly explore the world around them ▪ Are becoming more aware of family and social relationships ▪ May sense another person's unhappiness (such as another child crying) and now know how to help ▪ Become aware of consequences of own behavior	▪ Are developing the ability to take part in social groups, and for longer periods of time, increasing awareness of others ▪ May prefer to play alone at times or with others ▪ Are developing the ability to see that others have feelings and different views than their own ▪ May begin to respond to others in times of distress if they are supported and encouraged to do so ▪ Are developing an interest in the community and the world outside their own ▪ May begin to show an awareness of basic necessities (food, clothing, shelter) ▪ Are beginning to develop an interest in specific issues pertaining to their world (recycling) ▪ May begin to notice how people are similar and different from one another ▪ Are developing the ability to respond sympathetically to others if they are hurt, upset, or crying ▪ Begin to understand consequences of own and others' behavior

Widely-Held Expectations in Development of Responsibility

7–9 years	9–11 years	11–13 years
▪ Are learning to work in groups and are developing the ability to get along with others ▪ Can lead sometimes, and can follow others ▪ Are developing the ability to see how others act and what they expect in certain situations ▪ May be developing close friendships that are helping them learn to understand how others think and feel ▪ Continue to develop the ability to respond sympathetically to others if they are supported and encouraged to do so ▪ Continue to be curious about the world around them and may show interest in learning about other people (food, clothing, shelter) ▪ Are developing an interest in an enthusiasm for specific issues pertaining to their world and can define simple actions to help (returning aluminum cans for recycling) ▪ Are developing an appreciation of their own and other cultural heritages through special events, festivals, foods, folk songs, and other concrete experiences ▪ Continue to develop the ability to respond sympathetically to others if this is supported ▪ Continue to understand consequences of own and other's behaviors	▪ Continue to learn to work in groups if this activity is supported ▪ May become upset or distressed if they have problems with friends ▪ Begin to understand the idea of the differing contributions of group members to a common goal ▪ Are developing the ability to take a third-person view, in which they see situations, themselves and others as if they were spectators, but still do not coordinate these views ▪ May be developing the ability to see others have different viewpoints but still do not coordinate these views with their own ▪ Continue to try to develop the ability to respond sympathetically to others but still have difficulty in taking any point of view but their own ▪ Continue to develop an awareness of how own family meets basic needs ▪ Are developing personal views of important issues and values pertaining to their world and act upon their beliefs (making posters) ▪ Are continuing to develop an appreciation of their own and other cultural heritages; can talk about similarities and differences ▪ Continue to develop the ability to respond sympathetically to others and may try to help them ▪ Begin to "weigh" consequences of own actions	▪ May show that their relations with friends are increasingly important ▪ Continue to develop the ability to work cooperatively and collaboratively with others ▪ Are developing the ability to understand that there are several sides to an issue but are just beginning to show evidence of being able to take other views into account; still consider own point of view the right one ▪ Continue to develop the ability to see the worth of others' viewpoints if this is supported ▪ Continue to develop the ability to respond sympathetically to others and may begin to consider other points of view ▪ Continue to develop an awareness of how family needs affect others ▪ Are becoming more committed to their belief and personal views of the world around them (writing letters to newspapers) ▪ May begin to appreciate the rich multicultural heritage of their own country while cherishing family culture in relation to the whole ▪ May begin developing the ability to empathize with another's feelings in understandable situations ▪ Begin to "test" consequences of own and others' actions

Widely-Held Expectations in Reading Development

3–5 years	5–7 years
▪ Are curious about print in own environment—names of letters, sign, labels, and logos ▪ Play at reading: "read pictures" rather than print ▪ Begin with naming and commenting on the pictures, then telling stories from the pictures ▪ "Read" print in own familiar environment (restaurant signs, familiar places, traffic signs) ▪ Know that print is a source of information and enjoyment ▪ Begin to develop a "sense of story" ▪ Focus on the whole story rather than on individual words ▪ Begin to develop knowledge of some conventions of print, front-to-back directionality of books ▪ Rely on an adult or older child to read text ▪ Like books with illustrations, repetition, and rhyme	▪ Are curious about print—word forms and spellings ▪ Role play themselves as readers, relying heavily on memory at first ▪ Begin to focus on print, but use pictures to predict and confirm meaning ▪ Attempt to match voice to print ▪ Are increasingly able to recognize environmental print away from its familiar context ▪ Begin to develop a basic vocabulary of functional and personal words recognized on sight ▪ Understand that print "tells the story" ▪ Continue to develop a "sense of story" ▪ Are increasingly able to deal with the parts of print (letters and words) ▪ Increase awareness of print conventions (top-to-bottom left-to-right directionality, punctuation) ▪ Develop knowledge of common letter-sound relationships ▪ Begin to develop an ability to try reading print, including ways to figure out unknown words (common letter sound associations, picture clues) ▪ Choose short books with simple stories and illustrations ▪ Enjoy reading favorite books

Widely-Held Expectations in Reading Development

7–9 years	9–11 years	11–13 years
▪ Are interested in print (spellings, word meanings) ▪ Show interest in topics, characters, and events ▪ See themselves as readers ▪ Read for a variety of purposes ▪ Make greater use of context to predict and confirm meaning of words ▪ Begin to self-correct own miscues ("errors") ▪ Are rapidly increasing knowledge of words recognized on sight ▪ Developing ability to read silently ▪ Are increasingly able to read orally with fluency and expression ▪ Are developing knowledge of a variety of forms that communicate ideas (graphs, maps, charts) ▪ Have a "sense of story" and can identify the parts ▪ Are increasingly able to focus on details keeping main ideas in mind ▪ Understand the main conventions of print (directionality, punctuation) ▪ Develop increasing knowledge of letter-sound relationships and common spelling patterns ▪ Develop increasing independence in reading ▪ Show ability to make inferences (understand intent, draw conclusions) ▪ Are beginning to read novels; use books to find information	▪ May broaden their interests in fiction and non-fiction ▪ Are increasingly able to set own purposes for reading (read for interest, by topic, or favorite author) ▪ Self-correct own miscues confidently and independently ▪ Are increasing the length of time concentrating on reading ▪ Are increasing an ability to adjust reading rate to suit purpose (scanning to locate information) ▪ Begin to try reading material in various forms (graphs, maps) ▪ Are aware of different genres of reading materials and can identify some elements (the moral of a fable) ▪ Are increasingly able to deal with detail in content and form, while keeping main ideas in mind ▪ Understand the main conventions of print (directionality, capitalization, punctuation) and are developing an increasing knowledge of standard spelling ▪ Are able to read independently ▪ Show increasing ability to make inferences and to read critically ▪ Are able to organize information from reading ▪ May read longer and more demanding texts	▪ Continue to broaden their interests in fiction and non-fiction ▪ Read for an increasing variety of purposes and choose from a wide range of reading material ▪ Understand that different readers may interpret the same material in different ways ▪ Increase reading vocabulary, silent reading rate, length of time for concentration, and ability to adjust rate of reading to suit purpose (skim, scan, select, study) ▪ Increase ability to read various forms of text (graphs, maps, charts) ▪ Increase knowledge of an ability to identify and discuss the elements (characters, plot) of a variety of reading materials ▪ Are able to deal with detail in content and form while keeping main ideas in mind ▪ Understand the main conventions of print (directionality, capitalization, punctuation, and spelling) ▪ Are able to read independently ▪ Are increasing in ability to read critically and to detect inconsistencies in argument ▪ Are increasingly able to understand and discuss aspects of literature such as theme, conflict, and author's style ▪ Are increasing in the ability to persist with longer and more complex texts (more difficult novels, school textbooks)

Widely-Held Expectations in Writing Development

3–5 years	5–7 years
▪ View writing as something that people do and like to play at writing; are curious about letters and words ▪ Combine drawing and writing but drawing conveys most of the meaning ▪ May not intend to convey a particular message and may ask "What does this say?" of own writing ▪ Play at writing and may produce: – Scribble writing (imitative cursive writing – Random symbols (strings of forms that resemble letters) – Random letters (strings of letters) – Single letters that represent a sound (s for "snake) or a syllable (dd for "daddy" ▪ May produce some conventional words (own name, mom, dad) as well as play writing	▪ Are interested in the names of letters and how to represent specific speech sounds; write mainly for personal interest ▪ Combine drawing and writing to convey ideas ▪ Demonstrate increasing knowledge of letter names, common letter-sound associations—especially consonants and some forms of writing (labels, stories, letters). ▪ Produce increasingly conventional writing by: – Writing in capitals and moving toward the use of lower case letters – Spelling with consonants and moving toward phonetic spellings that include vowels – Spelling some common words conventionally – Showing some sense of directionality but may reverse some letters (b and d) or right to left at times – Starting to use some punctuation marks (periods) ▪ May produce: – Writing usually related to their own experiences – A label or caption to accompany a drawing – Single words or phrases – Short, simple sentences – A series of simple sentences – Simple stories with one or two characters

Widely-Held Expectations in Writing Development

7–9 years	9–11 years	11–13 years
▪ Enjoy writing and sharing own writing with others ▪ Begin to develop a sense of audience ▪ May combine drawing and writing, but writing can stand alone to convey meaning ▪ Demonstrate increasing knowledge of letter-sound relationships, including vowels, common spelling patterns, terms used with writing (letter, word, sentence); and forms of writing (poem, report) ▪ Produce increasingly conventional writing by: – Spelling an increasing number of words – Using upper and lower case letters and spacing between words – Conventionally using functional spelling when drafting – Understanding directionality (left-to-right, top-to-bottom of a page, front-to-back in a book) but still may reverse letters (b and d) – Developing the ability to punctuate (periods, question marks) ▪ May produce a series of connected ideas that make sense, stories with two or more characters, stories of a full page or more, and reports, letters, poems, and other forms of writing	▪ Enjoy receiving feedback from others about own writing ▪ Show an increasing awareness of audience ▪ Understand writing as "ideas written down" ▪ Can convey more complex ideas through writing ▪ Are able to write for an increasing number of purposes ▪ Demonstrate increasing knowledge of most spelling patterns, terms used with writing (paragraph, punctuation) and a variety of forms of writing (fables, fairy tales) ▪ Spell a considerable number of words conventionally ▪ Use functional spelling while drafting, but search for standard spelling before the final draft ▪ Use many punctuation marks conventionally (periods, questions marks) but may still confuse others (commas, quotation marks) ▪ May produce stories with two or more characters, topics of ideas supported by relevant details, a series of ideas connected smoothly and logically, a variety of sentence structures and varied sentence length, and more complex reports, letters, poems and so on	▪ Enjoy playing with words and ideas and can write from different points of view ▪ Value and seek out feedback on own writing and write for a wider audience ▪ Show increasing awareness of differences between speaking and writing ▪ Write for a broad range of purposes and can convey increasingly complex and abstract ideas through writing ▪ Demonstrate increasing knowledge of spelling patterns, terms used with writing, a wider range of forms and parts of speech, but are not yet able to grasp many of the formal aspects of grammar ▪ Produce increasingly conventional writing by using standard spelling and most punctuation marks (but still may confuse marks such as commas and semi-colons ▪ May produce writing that – Is easily understood, fluent, logically organized, unified, and elaborated – Is more complex in grammatical structure than speech – Contains more complex narratives with complex settings and characters – Has more complex non-narrative forms

Widely-Held Expectations in Mathematics Development

Birth–3 years	3–5 years	5–7 years
▪ Begin to recognize "one" and "more than one" ▪ Count to nursery rhymes or the alphabet song ▪ Begin to pick out one thing from a group; sometimes find two or three that are the "same" ▪ Begin to identify simple qualities of things like "soft" and "hard" or "hot" and "cold" ▪ Begin to get some ideas of how things are alike and how they are different ▪ May follow the "path" of an object ▪ May use simple quantity words such as "one more cookie" or "more milk"	▪ Recognize and count up to five ▪ Identify portions when sharing ▪ Recognize and name simple shapes (squares, circles, triangles) ▪ Match pictures to actual shapes ▪ Sort using a single attribute ▪ Recognize simple patterns ▪ Learn more qualities of objects ("thick" and "thin") ▪ Line up two or three objects using size or some other category ▪ Use language to begin to get ideas about space and time ("next to," "on top of," "before," "after") ▪ Compare objects ▪ Use measurement words ("big and small," "short and tall," "near and far") ▪ May recognize that two is always two and three is always three but does not apply this concept beyond five	▪ Count first by starting back at 1 each time something is added ▪ Begin to pick up counting where they left off, starting with 7 and counting on to 8 and 9 ▪ Count all types of things; play with counting forward or backward ▪ Enjoy counting to 10 and idea of big numbers ▪ Use pattern block and other materials to make and extend patterns ▪ Match objects in one set to objects in a second set ▪ Sequence things from the biggest to the smallest by size or other variable ▪ May insert items into a sequence at the appropriate place ▪ Enjoy lining up according to size ▪ May enjoy card games that help consolidate concepts ▪ Classify objects in a variety of ways ▪ May isolate a set from a collection ▪ May realize that a collection can be sorted in more than one way ▪ Begin to develop a stable idea of a straight line ▪ Try measuring all sorts of things but with non-standard units ▪ Begin to recognize that 10 is 10 or 20 is 20, no matter how objects are arranged in a group ▪ Work with simple number facts showing different sums with many types of materials

Widely-Held Expectations in Mathematics Development

7–9 years	9–11 years	11–13 years
• Begin to enjoy counting puzzles and games where they need to find a number between 10 and 99 • Are able to identify sets of objects with 2 or 3 attributes in common (separate triangles by color, size, and thickness) • May order things in a sequence in one set in relation to a sequence in a second set • Use rulers and yard sticks to measure length • Order numbers from 0–10, and then 10–100 and much higher • Group numbers by two, threes, fives, tens, and so on • Begin to classify things in more complex ways and use general categories and sub-categories • Begin to develop the idea of vertical and horizontal lines • Begin to estimate and measure and to use standard units to communicate similarities and differences • Begin to develop part and whole relationships and understand subtraction by separating a whole into parts • Make simple explorations with the concept of place value (combining groups of 100s, 10s and 1s to make different numbers) • Represent more addition and subtraction "facts" in a variety of ways	• Begin to understand the number system as a system built on tens particularly when working with base 10 block and other activities • Begin to extend number sequences to take in large numbers from 1,000 to 10,000 and beyond • May work on practical problems involving length, capacity, time, and large numbers; explore patterns in number systems; explore size relationships; build models of numbers 100, 1,000, 10,000; and refine abilities to estimate • Begin to see the need for a special measure • Continue to work on everyday problems involving length and may extend this to area, perimeter problems, using a variety of units • Have a better coordination of parts and whole as related to both time and fractional concepts • Work on many whole number problems • Begin to coordinate vertical and horizontal lines to help with ideas of area • Become comfortable using simple graphs to show relationships	• Begin to explore other ways to build number systems—for example, to think about numbers being represented by 0s and 1s • Begin to explore three-dimensional objects • May be curious about making drawings to scale • Begin to explore different simple number sequences which require more than simple addition and subtraction for their extension (2, 4, 8, 16 … or 1, 3, 6, 10 …) • Begin to experience the ideas of mass and volume • Begin to use line and pie graphs to represent information and explore relationships • Begin to explore more complex number relationships and represent ideas in a greater number of ways • Begin to use standard units for finding mass and volume based on many concrete activities • Use a variety of measurement tools • May begin to see the relationships between fractions and decimals • May develop the idea that the whole is equal to the sum of its parts as a basis for the idea of percent (interest rates in savings accounts, cost of sale items 25%) • May have some early experiences with the idea of variable

Aesthetic and Artistic Development in the Primary Program

Common Understandings

Education in the arts is concerned with the invention, expression, and examination of personal meaning. Participation in theater, drama, music, and visual art provides a unique mode of experience that stimulates creative and intuitive thought while developing aesthetic judgment and a sense of personal worth.

Children involved in the arts utilize processes of perceiving, transforming, valuing, and presenting. At the primary level, education in and through the arts represents recognition of the young child's natural disposition to make visual images, sing, dance, and take on a role, and should continue to develop and refine these forms of experience.

Primary age children need opportunities to transform sensory experience into languages not bound by words and to synthesize imagination, intellect, and emotion. The arts provide this challenge and allow the student to reflect upon the expressions of past and present cultures and to explore the ways in which these shape the future.

The primary arts program provides for a balance in the goals, disciplines, and approaches to education for primary children. Arts content for learning, and the descriptors that follow, reflect this balance among the four arts disciplines of dance, theater, music, and visual art. Each year, students should have learning experiences in all of these disciplines. Over the primary years, this balance should remain and always support the interests, abilities, and needs of the children.

In the arts, students learn most effectively through their own direct experiences, and their work will reflect significant artistic individuality. Approaches to teaching should actively encourage these artistic differences, permitting students to develop individual competency within art forms and confidence in their own abilities to express themselves.

Learning Through the Arts: Dance

Dance makes a significant contribution to the curriculum in terms of human development and expression. Every person uses motion both functionally and expressively, and every person comes equipped with the instrument for dance—the body. Expression through dance is the association of movement with qualities of feeling and with structure. Dance enables a statement of what we know; sense, feel, or value to be created in the form of body movement.

Dance is:
- An individual process of exploring, expressing, and externalizing aesthetic experience
- A powerful means of communication through movement
- An expression of tradition and culture

These characteristics of dance can serve to organize dance experiences for primary children into a framework which examines:
- Representing—doing dance
- Creating——dance making; and
- Appreciating-critical and sensitive response to dance and creative movement

The Child in Dance

By the time children come to school they have already learned spontaneously an enormous amount about movement, through observation, exploration, and play. Just as very young children absorb language from their environment, so do they also dance naturally in expressing their feelings and responses to their world. Movement skills are, therefore, already well-developed by the time a child enters school, and it becomes the task of the teacher to provide opportunities for this development to continue.

Physical Development

The kind and nature of movement experiences which primary children require are determined by physical characteristics.

- Large muscles are better developed than small muscles and hand-eye coordination is becoming refined. Since development of motor control proceeds from gross to fine and from general to specific abilities, movement activities should emphasize the whole body, avoiding intricate movement sequences.

- The heart has developed less rapidly than the other systems of the body, and children of this age may become fatigued. In a class that has a high level of activity, children require frequent rest periods interspersed with the activity.

- Children will begin to favor one side of their body due to the development of "handedness." Care should be given to encourage movement on the side that is not favored.

- There are no major physiological differences between boys and girls at this age. They all enjoy and need lots of rhythmic activity and learn well through the medium of dance.

Cognitive Development

Children of early elementary age are beginning to represent symbolic objects and events and their relationships. Motor activity and active exploration of the environment are vital to this process of symbolic representation.

Attention spans tend to be short and will determine the amount of high focus concentration young children can sustain within each dance lesson. Alternating instruction with child activity can maximize the amount of focused time available to the teacher.

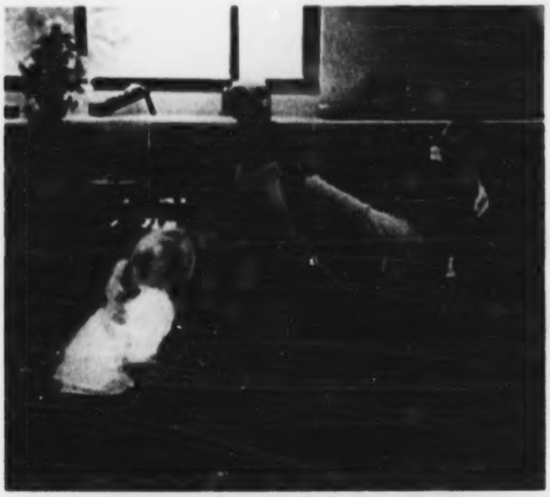
Egocentricity is characteristic of children at this age—dance work will tend to reflect their own spatial perspective, rather than ordering all objects and peers into a common perspective. Moving a class of children through gymnasium or classroom space, therefore, requires special attention to safety and respect for the movement space of others.

Psycho-Social Development

Children in the primary age range need a great deal of encouragement and support from their teachers in order to take risks and try new experiences. They seek approval from adults to confirm their participation in a new activity and to reinforce their learning of a new skill or concept.

Students will enjoy relating to their peers and working with them in a group situation, as they are developing comfort with social interaction and the demands of group participation.

Imaginative play is very well developed in children of this age, and they are eager to involve themselves in imagined situations, creative challenges, and role-play.



Dance Movement Skills

Body	Dynamics	Space	Relationships
What the body does	*How the body moves*	*Where the body goes*	*With whom the body movements are done*
Locomotor Walk Run Skip* Jump Hop Slide* Gallop Lean *Uneven rhythm **Non-Locomotor** Bend/stretch Swing/sway Rise/fall Twist/turn Strike/dodge Push/pull Stop **Body Shape** Side/narrow Twisted Rounded/angular Symmetrical/ asymmetrical **Body Percussion** Snaps Claps Stamps Slaps	**Time** Sudden/sustained Pauses Speed-fast/slow ▪ Accelerate ▪ Decelerate Rhythmic **Energy** Muscular Force ▪ Strong/light Weight ▪ Heavy/light **Flow** Free/bound	**Direction** Forward Backward Sideways Diagonal **Size** Large Medium Small **Level** High Medium Low **Pathways** Floor and air Straight/angular Curved **Focus** Eyes Body	**Situations** Teacher/class Individuals/groups Partners/individuals Meeting/parting Action/reaction Near/far Contrasting/Matching Leading/following Mirroring Shadowing Echoing Connecting Supporting **Formations** Scattered Lines Squares Circles Groups Bunches

Representing: Doing Dance

Basic Elements

There are four basic elements of dance:

- **The Body**—The instrument of dance and the vehicle for artistic expression and communication is the body.
- **Dynamics**-Variations in time, energy, and flow influence the movement and create interest and emphasis in dance.
- **Space**-In dance, real space is transformed into symbolic space. The way a dancer relates to space as well as to objects in that space helps create the meaning of dance.
- **Relationships**-The relationships between and among dancers form the basis for pattern and structure.

Kinesthetic Awareness

Children need daily experiences that will extend their own body awareness and develop their conscious perception of how the body feels in a wide range of movement activities.

In imaginative play, children's ideas, emotions, and impressions need to be expressed through movement to build on their natural capacity and inclinations in dance. Through a variety of movement challenges, students will acquire muscle "memory" and understand how their bodies react to an array of demands.

Open and sensitive attitudes toward the body are important in the primary years in order to develop children's relaxation and concentration on movement, naturally and successfully.

Creating: Making Dance

Imitation

Using a "follow-the-leader" approach, students can explore different movements and skill combinations demonstrated by the teacher and by one another, either simultaneously or as an echo following the observation. Through these experiences, children learn what movements and sequences are possible and how individual elements contribute to the movement.

Exploration

This aspect of dance involves the child's exploration of movement generated as a result of a challenge or question presented; for example, "Move as if the floor were a boiling river bed, and you must cross it to reach safety on the other side." Through comparison and discussion of the solutions demonstrated, students begin to learn how to make their own individual decisions in problem solving and increase their repertoire of appropriate movement responses. Reflection and discussion lead to further work and to refinement of the dance sequence.

Improvisation

This process involves the student's spontaneous response to a stimulus such as music, short stories, poems, news items, drawings, paintings, and visual patterns. Students use the skills from their imitation and exploration activities to form a knowledge and experience base for their improvisation.

Improvisation requires considerable preparation, support, and direction from the teacher in order to develop confidence and spontaneity in the student. The dance or movement problems must be clearly expressed and formulated according to the ability level of the students in order to stimulate movement that is personally satisfying to each child. In compositional work, students will need to have many imitative and exploratory experiences with each step of the process before approaching an individual or group task.

Appreciating: Critical and Sensitive Response

Critical Response

What happens in a dance class must relate immediately to the child's life. The descriptions, discussions, reflections, and analyses of movements from children's own experiences will serve as starting points for responding to dance elements, form, and content observed in their own work and in that of others. From this foundation comes the habit of inquiry in which students are always identifying and reflecting upon what is expressive in a dance work and reacting to what is perceived through discussion, writing, or verbal or visual images. A student will begin to formulate preferences in terms of form, style, and overall impression as well as the ability to explain these preferences with reference to the appropriate dance elements and how these affect the presentation as a whole.

Dance Awareness

Dance provides a medium for expression that involves movement of the total self, not merely a part or an extension of the body. Children will delight in the direct awareness and control of their own bodies. They need however to acquire an ability to think in terms of movement so that representing through this form involves creative use of the dance elements, not merely a dramatization of ideas or events. They need to develop their ideas for a dance in terms of dance elements (for example, time, force). When they become familiar with movement as a distinct and separate area of expression, not just as an adjunct for dramatic action, then they will express and communicate spontaneously and delightfully through this form.

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Learning Through the Arts: Theater

Principles of Theater

Theater is about how people deal with each other. It is the symbolic representation of human interaction and, thus, encompasses those dynamics of human interaction that are natural to people: language, symbol, gesture, valuing, and negotiation. Two basic principles apply to learning in theater:

- *All people live their lives within a dramatic context.* Teaching children to recognize the nature and characteristics of this dramatic context provides them with the ability to understand and to make decisions about and during life situations.

- *Students should learn to make informed judgments about theater arts,* for example, understanding and expressing preferences in theater, film, and television.

Components of Theater

As an art form, theater is an aesthetic combination of the following elements:

- ***Tension*** defines the dynamic quality of all human relationships and is in constant flux.
- ***Focus*** deals with our need and ability to select from the many stimuli around us.
- ***Form*** is the medium for the expression of dramatic meaning and also a part of the dramatic meaning itself.
- ***Symbol*** is the device we use to represent ourselves, our feelings, and our values.

These components are dynamic and interdependent, and they exist in ever changing relationship to one another.

Theater as a Process

Theater is a process centered on the child. It involves the spontaneous dramatic play of young children and the games, characterizations, and dramatizations arising from children's imagination and experience. Children within a dramatization define their own expectations and are, therefore, free to challenge themselves, to experiment, and to grow. Success in a dramatization comes from the depth of the experience for the participants and the new understanding that emerges of an issue or of relationships.

Theater is an art form involving the presentation of dramatic literature to an audience. Theater entertains and makes a statement. A communication between audience and performers is intended in which the skills of actors, directors, designers, and technicians are focused toward an aesthetic ideal.

Children learn to interpret and represent the dynamics of human interaction through their work in dramatic play. This understanding is the foundation of knowledge about the art of theater. In addition to the opportunity to create through drama, children in the primary program should experience a variety of appropriate, quality live theater, film, and video performances. Through participation and experiences in theater, children develop an understanding of the diversity of human relationships.

Theater as a Learning Medium

Theater is a special learning medium. While it is a discrete area of learning, it can also be an effective method of teaching concepts from other disciplines. That is, theater is simultaneously subject and method.

Working in theater naturally invites the introduction of knowledge and skills from many disciplines. The human dilemma inherent in every story stimulates a search for all aspects that can contribute meaning in context. It would be natural for a story to arise from a social studies issue and then to involve writing, singing, drawing and painting, measurement and design, team building, and decision-making. All of these skills and knowledge will be learned because they have personal meaning for each student in the context of theater. Personal, self-initiated learning is the most effective.

The Child in Theater

Learning through theater is essential at all ages. Since the nature of the theater experience alters itself to suit the age and prior experience of children, a similar starting point may be equally valid for different groups. For example, all ages are capable of designing and carrying out a puppet play. The complexity of the script and the design will vary with the development of the learner. Since the experiential context and language base of each group is different, the learning arising from the experience is also different.

Children engaged in theater will be creating their own solutions. The results are determined in process. The outcome of dramatic play is not predetermined. The objectives of the lesson are set, but the impact of the learning is realized only after reflection on the choices made in seeking the solution.

Theater releases children to move, speak, and respond more freely than many traditional classroom activities which may have implications for classroom management. In theater, as in all learning, there is a responsibility to ensure that activities are safe as well as effective. Drama activities whether exercises, role playing, or theater, should contain control to ensure maximum engaged learning time. Children should understand the theater process and the signals by which the theater will be governed.

Children need to draw personal meaning from their school experiences. Drama teaches the knowledge, skills, and attitudes that are basic and necessary for contemporary social interaction. The child-centered approach in theater creates a context that has personal significance for the student and enables all children in:

- Observation
- Comprehension
- Sense awareness
- Listening
- Self-expression
- Self-confidence
- Problem-solving
- Organization
- Criticism
- Imagination
- Trust
- Concentration
- Speech
- Movement
- Thinking in sequence

Doing and Responding to Theater

Theater is organized around the interrelated areas of appreciation and creation. Responding to theater and doing theater are both integral aspects of any theater experience at the primary level.

Theater involves the use of specific techniques and structures that can develop in variety, sophistication, and subtlety with experience. Reflection and discussion should take place as part of the experience and will often lead to a change of attitude or a different understanding. Children learn about themselves and others and have the opportunity to integrate all kinds of knowledge and experience.

Elements of Theater

The elements of theater are the specific skills that enhance children's ability to participate and communicate their ideas and feelings. Theater elements can be developed individually or in combination. They are *observation and sense awareness, listening, imagination, trust, concentration, speech,* and *movement.*

Contents	Characteristics
Observation and Sense Awareness	▪ Identification and use of all the senses; focus on one or more senses; observation and memory of the observation
Listening	▪ Focused listening, identification of specific sounds, speech
Imagination	▪ Creation of and response to personal images; acceptance of and response to more than one image
Trust	▪ Identification of own strengths and weaknesses; risk taking; presentation of work to others; demonstration of leadership
Concentration	▪ Focus, lack of distraction; identification of focus and of changes in this in the drama
Speech	▪ Clear, appropriate speech, using variations in pitch and dynamics, formal and informal language to enhance meaning
Movement	▪ Free and controlled movement; expression of meaning through appropriate movement; compares and contrasts through movement

Structures of Theater

The structures of theater assist children to gain experience of difference forms. Children should develop an awareness of the relationship between form and meaning. Active involvement is encouraged. The lesson objectives and the students' and teachers' experiences will determine which of the drama structures are appropriate. Theater structures are role, improvisation, mime, story telling, and puppets.

Contents	Characteristics
Role	▪ Assuming, acceptance, and development of a role; creation of situations in role; commitment to role; contribution to the drama
Improvisation	▪ Group and individual dramatic play; presentation of original ideas and solutions to problems
Mime	▪ Representation of own imagined objects and acceptance of those presented by others; communication of ideas and feelings without speech
Story Telling	▪ Sharing of stories and anecdotes with others; telling and dramatization of stories from written text or oral tradition
Puppets	▪ Operation of a puppet; acceptance of puppet character and limitations; development of appropriate speech for the puppet

Theater Discussion

Reflection and discussion should be included in every theater experience. Oral, written, and visual responses will enable the student to explore the relationship between drama experiences and real life situations. It also provides the opportunity to reassess choices made and suggest other alternatives in many cases. Discussion of their own work and the work of others will enhance language development and give children the vocabulary to analyze and evaluate theater experiences.

Contents	Characteristics
Response	▪ Description, interpretation, and personal response to the theater; discussion of main idea, plot, character, development; reflection on own participation and that of others; comparison of observed works from school, community, and from public media networks

Theater and People

Theater is about people and how they interact. Learning in this area is directed toward the growth in understanding that students have about human relationships and the forces acting upon these relationships.

Contents	Characteristics
Reflection	▪ Response to individual and group presentations; consideration of many points of view; respect for interpretation of others

Learning Through the Arts: Music

Music is a language, a vehicle for oral/aural expression. The process of becoming musically articulate should begin early and be reinforced throughout the later years. Music provides a medium for communicating personal meaning; therefore, the responses to music are as varied as the children in the primary program.

The nature of the music experience in the beginning years is of vital importance to a complete and thorough understanding of what it means to communicate ideas and feelings and to respond to them through music. Music learning should encourage individual exploration of the elements of music as well as develop an understanding of the ways these have been organized by musicians and composers to communicate events, feelings, and ideas. Children should begin to think and create as musicians, expressing, perceiving, and reflecting upon music. They should be making up, comparing, and sharing songs, chants, rhythmic and melodic patterns, and sound collages. They should be exploring and responding to the elements of music—sound, silence, rhythm, and style. Sound producing instruments (including the voice) should be explored thoroughly and used to arrange musical ideas by experimenting, discussing, reflecting, and responding.

Through frequent singing of a wide variety of song material—folk songs, seasonal songs, lullabies, humorous or action songs, and songs from other lands—children will develop the ability to match tones, make melodic responses, and sing in tune. They will extend and build on their own vocal qualities and feel the pleasure of contribution to group vocal sound as their voices blend together. Participation in singing and in music making will also enhance students' overall listening skills and their ability to focus hearing. Through listening and actively responding to the work of musicians and composers, children can begin to feel what they hear and hear what they feel. This brings awareness of new qualities of sound and evokes personal responses to the music.

The Child in Music

Young children can distinguish among sounds with obvious differences (high/low, loud/soft, speech/song). They usually sing in treble voices, in the range from "F" to "F" so their song material should be pitched accordingly, allowing them to sing easily at their own comfort level. Children may not understand the difference between the singing and speaking voice unless the singing is pitched at a high enough level.

Since large muscle coordination is fairly well developed, young children can move freely to rhythms and perform body percussion which uses large movements. Musical activities that help develop small muscle control, such as fingerplays, are very appropriate and most enjoyable for children. Body percussion patterns for reinforcing the beat should be organized at first according to a top-to-floor kind of sequence, which will be easier to start with, for example: head, shoulders, knees, toes. Where instrumental sequences or accompaniments are required in the music activity, easily controllable percussive instruments should be used at first, for example, hand drum, triangle, rhythm sticks, and sand blocks.

Most often, musical expression takes the form of a group activity such as singing, ensemble instrumental work, or a cooperative game. However, children of this age group are very egocentric and enjoy hearing their own voices, playing the instrument themselves, or working on their own composition. Therefore, students will need to build the interaction skills that group work requires.

Internalization of the beat is the basic prerequisite for rhythmic learning, and children need repeated, daily rhythmic activities. This may be practiced through a song, a fingerplay, a poem, or a repetitive story. The development of rhythm in music supports the development of rhythm in language.

Music learning is holistic. Like other subjects taught at this level, it is most meaningful when presented as an integrated whole. Isolated elements which need emphasis should be taken from a known context, without detracting from the pleasure of experiencing the song, game, or rhythm activity.

Musical experiences should be incorporated throughout the day and connected to the other curriculum areas of the primary program. The above characteristics of music can serve to organize the learning experiences for primary children into a framework which examines:

- Representing—making music
- Creating—musical composition
- Appreciating-critical and sensitive response

Representing: Making Music

Singing and Playing

These activities are fundamental to the music program since they form the basis for later musical expression. Wide experience in singing games, rhythmic chants, and songs of various kinds and cultures should be part of every school day.

Experiences in singing alone or with a group from memory or from simple notation, in unison or as a part in a round are central to the music program and crucial to the development of basic attitudes, skills, and knowledge in music. Ongoing musical experiences are desirable to sustain satisfaction and to document progress.

Keeping the beat with simple percussion instruments or through movement will develop the concept of rhythmic pulse in music and language; memory; fine motor control; and the ability to play in an ensemble.

Exploring pitch patterns on melodic instruments will enhance the child's ability to discriminate higher/lower sounds and reinforce the concept of key, including the organization of scale and tone.

Elements of Music

The fundamental elements which permit musical expression are described below:

Beat	The pulse of the music which, like a human pulse, occurs at regular intervals and organizes the time limitations.
Rhythm	The arrangement of long and short sounds and of silences results in rhythm patterns which are subdivisions of the beat.
Meter	Organization of accented and unaccented (strong and weak) beats into groups.
Pitch	Definition of sound as high, low, or somewhere in between.
Melody	A series of sounds of different or repeated pitches which are linked together. The rise and fall of the pitches by small or large degrees gives the melody its distinctive shape.
Form	The design of the music, the way the musical phrases are arranged, their repetition or contrast, gives the music its form.
Harmony	Harmony is created by the simultaneous sounding of two or more notes of a chord. Traditional harmony defines the chord structures upon which a piece of music is based.
Dynamics	Musical dynamics are the degree of loudness and softness (volume) of the sound.
Tempo	The speed at which the beat moves: a faster beat results in a quicker tempo.
Timbre	Also called tone color, the characteristic quality of a sound that distinguishes it from other sounds. Voices, instruments, and environmental sounds vary in their timbres according to shape, size, material, and way the sound is produced, for example, by striking, blowing, plucking.

Creating: Musical Composition

Most young children will improvise songs spontaneously. They enjoy playing with musical ideas, language, and sounds. Classroom musical activities can build on this natural, free exploration for creative musical growth in later years. Students can explore vocal sounds; improvise their own songs for poems or riddles; add new verses to a known nonsense or other song; sing improvised "answers" to unfinished musical "questions" sung by the teacher or other students; and create a simple, melodic ostinato for a known song.

Using classroom instruments, children can create melodic and rhythmic patterns; complete musical sentences; develop sound effects for a song, rhythm chant, story or verse; create a simple instrumental accompaniment for a known song; and compose their own musical pieces to express a mood or feeling. Using sound to create a personally satisfying musical statement compels students to make decisions about sounds and musical expressiveness and to draw conclusions about how music functions, how it is organized, and how it can represent feelings, ideas, or events. Through composing, students are able to learn about music at their own level of understanding, using the knowledge they have gained from previous imitative or exploratory experiences.

Responding: Critical and Sensitive Response

Although essentially abstract in nature, music is a powerful medium for communication and personal expression found in every culture. The ability of music to express and communicate depends on the way sounds and silences are manipulated and grouped, the way the musical elements interact with each other as well as on instrumental, vocal, and design effects.

Response to music is a very individual matter. Some children will link musical events with real ones, some will visualize an imagined context, and still others will respond on an emotional level with joy or sadness, fear or relaxation. People's responses differ according to their past experiences, their personal context, and their level of learning in music itself. Although there will be similarities in the responses people have, music, unlike language, cannot always be translated into a specific image, event, or emotion.

As students expand their musical knowledge, they begin to develop a set of aesthetic values upon which to make musical judgments and which allow them to comprehend the expression of feeling in music and thereby heighten the pleasure they derive from it.

Learning Through the Arts: Visual Art

In the end I do not distinguish science and art except as methods…Art is the representation, science the explanation of the same reality. Read, 1974

Art is basic to individual development and must be taught effectively beginning in the early years. The Arts, Education and American Panel of the American Council for the Arts in Education issued the following statement in the late 1970's:

> "This Panel supports the concept of 'basic education,' but maintains that the arts, properly taught, are basic to individual development since they, more than any other subject awaken all the senses—the learning pores. We endorse a curriculum which puts 'basics' first because the arts are basic, right at the heart of the matter. And we suggest not that reading be replaced by art but that the concept of literacy be extended beyond word skills."

Art is a distinctive way of knowing. A child can represent knowledge, skills, and attitudes through the medium of the visual arts. Children's art is nonverbal language. Children can communicate thoughts and feelings in art before they develop more conventional means of expressing ideas and emotions in words (Lasky & Mukerji, 1980).

> *Children can communicate thoughts and feelings in art before they develop more conventional means of expressing ideas and emotions in words.*
>
> Lasky & Mukerji, 1980

Every teacher has seen the power of the language of art. From the child who explores with paint in order to make sense of the medium to the child who represents a growing plant in the science center, art assists children in making meaning for themselves about the world. Making sense is the path to learning, one of the basic tasks for young children. They learn by making connections between earlier experiences and current experiences so that ideas become clearer, more focused, or more accurate.

The visual art component of the primary program reflects both current trends in art education as well as the goals of the primary program. Children enter school with previous experiences in art. By developing these attitudes, skills, and knowledge, students extend their visual ideas and respond to their world with an increasing level of conceptual and aesthetic awareness.

Students learn in art by developing and responding to images. Through the process of creating images, children can represent their ideas and feelings in visual form. This opportunity to give meaning to experiences by expressing them in a visual way provides children with a unique means of communicating what they see, think, and feel. Art is also a process of responding to images whereby children come to know and appreciate their visual form, sharing their understanding of the world around them. They express personal views; explore new ways of perceiving; investigate past, present, and future worlds; and use their imaginations to think, discover, invent, and express new ideas. As children develop and respond to images, an understanding of the elements and principles of design emerges. Experience with a variety of materials and processes also increases children's understanding of what they see and make.

The Child in Art

Children Learn Through Art

All areas of the child's development are enhanced by aesthetics. Visual art connects with physical, cognitive, and social development (see chart below, Lasky & Mukerji, 1980). Incidental learning, for example, sequencing a process as one child explains it to another; and guided learning, for example, children are building a town in the block area so the teacher suggests making some buildings out of the boxes in the art area; occur as the child is engaged in active learning.

Physical/Perceptual Development	Cognitive Development	Social/Emotional Development & Development of Responsibility
▪ Tactile-kinesthetic awareness ▪ Visual awareness ▪ Spatial awareness ▪ Body awareness ▪ Eye-hand coordination ▪ Laterality and directionality ▪ Shape, size, color discrimination ▪ Figure-ground orientation ▪ Part-whole discrimination ▪ Fine motor control ▪ Technical skills	▪ Clarification and elaboration of meaning ▪ Association of related information and ideas ▪ Sequencing of events ▪ Understanding of cause and effect ▪ Ability to solve problems ▪ Ability to make decisions ▪ Ability to generalize ▪ Ability to communicate ideas non-verbally	▪ Sense of identity/individuality ▪ Sense of autonomy/independence ▪ Expression of positive emotions ▪ Extension of flexibility ▪ Aesthetic growth ▪ Ability to appreciate and value others' ideas and work ▪ Ability to share ▪ Ability to cooperate ▪ Ability to take turns (delay gratification) ▪ Ability to adapt to group needs/interests ▪ Ability to resolve interpersonal conflicts ▪ Acquisition of interests for leisure time

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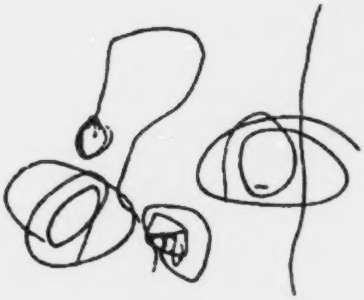
Stages in Art Development

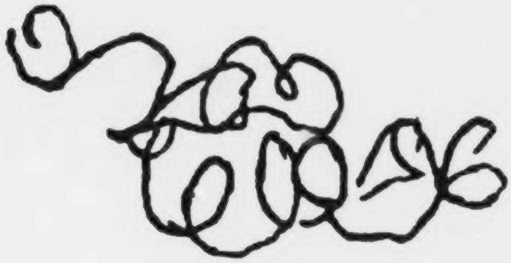
By the time children arrive at school, they have had considerable experience in image making. A scribble stage can begin as early as eighteen months if the child is given the opportunity. Research has provided us with some insights regarding universal stages children go through in their image development. The activities and materials offered must be suited to the developmental age as well as to the interests and abilities of students. The following is a brief summary of normal image development stages. (Note that each of the four interrelated content areas, as outlined in the conceptual model, is involved in the earliest stages of art development.)

The Scribbling Stage

At this stage, the child realizes the excitement of making a mark. The exploration of different types of marks from straight strokes to circular lines develops, and greater mastery of control and placement is achieved as the child continues to experiment.



Random Scribbling
Age nine months to two years



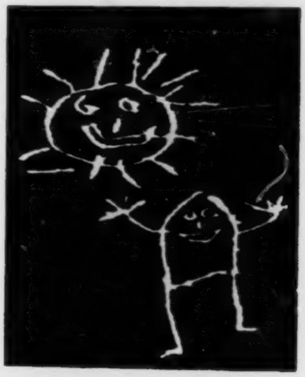
Named Scribbling "Wooly Bear"
Age two

The Symbols Stage

Soon after the discovery that a mark can be made comes the realization that a drawn mark can stand for something and be named. In children's play three-dimensional objects can also become symbols.

By the age of four or five most children are drawing pictures to tell stories and to work out problems. They develop symbols for figures, faces, and objects in their environment. These schema continue to evolve as the child continues to learn from drawing and modeling experiences.

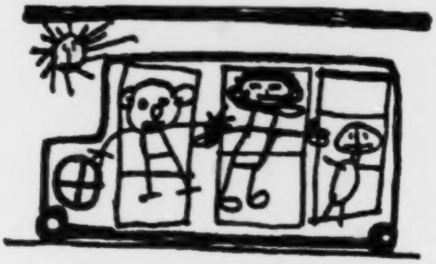
"Man in the Sun"
Age four



The Stage of Complexity

Beginning in early elementary children strive for more detail and realism in their art. They become less easily satisfied with the completeness of the composition of their drawing. The three-dimensional forms children produce also need to become more realistic to satisfy them. Symbols are replaced by attempts to represent specific object or people.

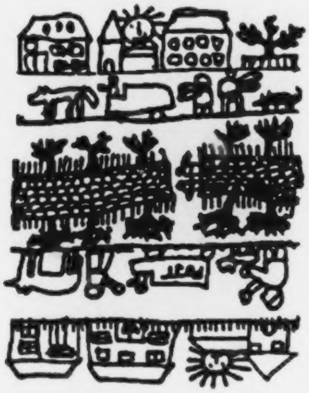
As students move through the primary years their passion for realism continues. This can lead to a sense of frustration if they are not helped to see that there are solutions to problems in art. With continued exploration and learning from experience children are able to learn to use symbolic, realistic, and imaginative solutions to visual problems.



X-Ray Drawing "People in Bus"
Age five

To help children learn to their full potential visual art experiences must challenge and extend their ability and thinking. While there is some agreement regarding the overall pattern of artistic development, each child has unique needs, interests, and capabilities. These will vary considerably and be influenced by previous experiences, knowledge, and skill in visual art, by level of maturation as well as by social and cultural background. Some children make rapid leaps forward or return to earlier forms of image making for reasons of their own.

Development does not take place automatically as a result of maturation. All children need continuing and sequential learning experiences which are appropriate to their needs, interests, and development levels. Observing changes in the images and objects created will help teachers and parents understand, share, and assist children's artistic development.



Fold-Over Drawing "My Street"
Age six

Organizing Art Experiences

One way to organize the art experiences for primary children is a framework which examines:

- Developing images
- Materials and processes
- Elements and principles of design
- Responding to art

Developing Images

Image making is a human characteristic and can become an important language—a way of recording observations, past events, feelings, and fantasies; a way of knowing. For children, image making is a natural activity, as natural as speech. They express themselves visually with anything that will make a mark on anything that will take a mark. This process starts at an early age and grows and changes as the child matures. Scribbling precedes image making in much the same way as babbling precedes speech. The same is true for three-dimensional exploration.

Image making begins with looking, experiencing, and remembering. Rich sensory experiences help students to develop observational skills and to create personal images. Through discussion, students may recall memories and images that stimulate their imagination to depict real and imaginary worlds. Through this, students realize images come from different sources and develop an awareness of an infinite variety of subject matter for art. It is the way in which ideas are translated to visual statements that is the essence of image making.

Images may range from simple marks to very complex pictures, not necessarily recognizable. Through discussion of such variety, students realize that images can be recorded in many ways and develop an openness to such variety and a sensitivity to differences. The influence of materials and processes is important in image development. Students should develop ease and self-confidence in using materials in unique and interesting ways as they create images.

The power of images to convey an emotional quality, to communicate a message, or to record an event cannot be overlooked. Students may become fluent in the use of visual terms to describe their feelings about images. Image development activities should at all times reflect the student's own ideas and feelings. Through continued exploration of the relationships among making and responding to images and by exploring the impact of materials and processes on images, growth in personal expression can occur.

Images come from different sources:

- Theme ideas from a variety of personal sources as a basis for an image such as "My Family," "My Pet," "My Friend," "My Visit"
- Focused looking and recording (observations)
- Remembering events and recording memories (memory)
- Imagining an event (for example, fantasy, "What if…?")
- Stimulation by other art (paintings, drawings)
- Stimulation by other art forms (music, theater, literature, dance)
- Stimulation by themes in other subjects

Images can be recorded in many ways including:

- Drawing
- Painting
- Print making
- Textiles

Images communicate. Children make and discuss pictures that convey a mood such as:
- Happiness
- Sadness
- Scariness

Images can that tell a story (individually or in groups):
- Recording a festival or celebration
- Illustrating a passage from a story

Materials and Processes

A variety of materials should be made available. Students should be provided with opportunities to explore and manipulate materials and processes that are simple to understand and use. However, changes from one material or process to another should be balanced with the need to allow students to achieve some competency and a feeling of accomplishment within each. Repetition will also allow students to become more proficient in rendering images.

Art materials may be stored in the art area, but should be accessible to other areas. Materials and appropriate storage are provided, techniques and processes are explained and demonstrated so children have the opportunity to explore, experiment, and represent their feelings and ideas. Depending on the topic, the teacher may introduce related materials and techniques. Working with a variety of materials and processes in art provides a great opportunity for vocabulary development. For example, specific types of drawing such as continuous line, tone, and contour can be identified. Qualities of continuous lines such as flowing, highly detailed, sensitive, or weighted can be described. Relationships to imagery might also be noted by describing approaches such as "from memory," "from fantasy," or "from observation." Such vocabulary development is essential in verbalizing responses to art.

Drawing—Draw with pencil, crayon, felt-tipped marker, chalk, pastels, and improvised tools such as sticks and swabs. Use a variety of surfaces (damp, wet, dry) and paper types (dark marks on light, light marks on dark). Make line drawings, shape drawings, contour and continuous line drawings.

Painting—Paint with a variety of brush shapes and sizes, sponges, fingers, and improvised brushes. Use a variety of surfaces (damp, wet, dry), paper and card types, and colored surfaces. Use a variety of paint methods (stain, wash, resists, tempera, dye.)

Textiles—Make paper collages, fabric collages, yarn pictures, and stitching on a plain background. Use a variety of fibers and fabrics, sorting and matching yarns and fabrics. Consider fabric construction, paper weaving, fiber weaving, knotting, and tying.

Modeling, carving, and construction—For modeling, use a variety of materials such as clay, plasticine, and baker's clay. For carving, use materials such as soap, clay, and styrofoam. Construction materials include balsa, cardboard, styrofoam, paper, paper mache, and paper folding to make puppets, masks, dioramas, build environments, containers, stuffed paper forms, and mobiles.

Suggested Art Materials

- Crayons & chalk
- Oil pastels
- Finger paints
- Tempera blocks
- Liquid tempera
- Watercolor paints
- Fluorescent paints
- Easels or table space
- Drying rack or line
- Containers & sticks for mixing paint
- Sponges & straws
- Toothbrushes
- Swabs & cotton balls
- Empty deodorant bottles for roll-on painting
- String & fibers
- Wood
- Tissue & crepe paper
- Construction paper
- Fabrics & trim (felt, lace, ribbon)
- Gift wrap
- Felt tip pens & markers
- Buttons
- Craft sticks
- Clay & wax
- Molding dough
- Spoons & straws
- Molding hammers
- Work mats
- Objects for printing
- Brushes (thick, thin, round, bristles)
- Foods
- Feathers
- Hole punch
- Scissors
- Fasteners (glue, paste, tape, staples, clips)
- Materials from nature (shells, cones, leaves)
- Boxes & egg cartons
- Junk bits (washers, screws)

Art Safety

Classroom art materials may pose health risks. In some cases, taking precautions will be sufficient to overcome dangers; in others, substitution of materials will be required. Students and teachers should be aware of hazards as well as precautions and acceptable substitutions. Teachers should be aware some art materials can be toxic when inhaled or ingested. Children might put colored pencils in their mouths, for example, or put their fingers in their mouths after handling something toxic. Children under 12 should not use the materials in the left-hand column below. Substitute materials are shown on the right.

Hazardous Materials	Safe Substitutes
▪ Clay in dry forms (the dry powder contains silica, which is easily inhaled and may cause silicosis)	▪ Clay is safe in wet form only (wet clay cannot be inhaled))
▪ Glazes or dyes that contain lead	▪ Use poster paints instead of glazes
▪ Solvents (e.g., turpentine, benzene, rubber cement, and its thinner)	▪ Use water-based paints and other materials
▪ Permanent markers that may contain asbestos fibers or lead from pigments in colored printing inks	▪ Use only water-based markers
▪ Some instant paper machés may contain asbestos fibers or lead from pigments in colored printing inks	▪ Make paper maché from black and white newspaper and library or white paste
▪ Aerosol sprays	▪ Use brushes, water-based paints, and splatter techniques
▪ Powdered tempera colors (their dusts may contain toxic pigments)	▪ Use only liquid colors (the teacher can premix the pigments)
▪ Arsenic, cadmium, chrome, mercury, lead, or manganese pigments	▪ Adequate labeling is needed on art materials
▪ Pastels that create dust	▪ Use crayons or pastels that are oil-based
▪ Lead solder and stained glass	▪ Use colored cellophane and black pigment to simulate lead
▪ Epoxy instant glues or other solvent-based glues	▪ Use water-based white or library paste
▪ Solvent-based silk screen, other printing inks	▪ Use paper stencils and water-based ink

Elements and Principles of Design

The elements and principles of design name aspects of visual organization. They are, therefore, one way of conceptualizing and naming the properties of art. The study of the elements and principles of design should always be related to the development of imagery and/or response to art. In order to allow students to experience both the depth and variety of visual arts as a social phenomenon and human experience, the elements and principles must not be taught for their own sake or in isolation. Students would then be deprived of the opportunity of discovering alternate ways of thinking about visual art.

At the primary level, the formal teaching of the elements and principles of design should not be unduly emphasized. Through the sensitive choice of materials and topics, students can develop a growing awareness of line, shape, color, and texture in their own work, in that of others, and in the world around them.

Using the elements alone or in combination can achieve the principles of design. Students may also be guided to recognize balance, symmetry, pattern, unity, and contrast in their environment and in art. For instance, a study of shells may introduce the concepts of balance and symmetry and lead to a deepened appreciation of pattern. The elements and principles of design as organized within an image may record, communicate a message, or give an impression of a feeling. The viewer can learn to see these, interpret a meaning, and make a judgment. Such discrimination is essential when verbalizing responses to art.

Elements of Design

Line	Shape and Form	Color and Tone	Texture
Make different kinds of lines: ▪ Straight/curved ▪ Thick/thin ▪ Long/short Make families of lines that express mood and emotion. For example, anger can be expressed using the following kinds of lines: ▪ Bold ▪ Jagged ▪ Spiky	Work with simple shapes and forms: ▪ Circles/spheres ▪ Squares/cubes ▪ Triangle/cones Make geometric and organic shapes. Combine shapes to make families of shapes. Work with positive and negative shapes.	Use primary colors (red, yellow, blue) and black and white. Mix and use secondary colors (orange, green, and purple) and black and white. Use light and dark colors. Mix and use tertiary colors (red-orange, yellow-orange, yellow-green, blue-green, blue-purple, red-purple). Use black and white to change value (tints and shades).	Work with textured surfaces such as: ▪ Rough ▪ Smooth Compare and contrast families of texture. Compare and contrast the textures in the natural and human-made environment.

Principles of Design

Use elements alone or in combination to achieve the principles of:	*Use elements alone or in combination to achieve a mood:*	*Use elements of design to create:*	*Organize space using:*
▪ Balance ▪ Contrast ▪ Emphasis ▪ Movement ▪ Pattern ▪ Unity	▪ Happiness ▪ Sadness ▪ Scariness	▪ Patterns ▪ Balance ▪ Focal points ▪ Proportion	▪ Contrast of foreground and background ▪ A specific point of view (bird's eye view, bug's eye view, side-view, and upside-down view)

Responding to Art

It is essential that young children have the opportunity to respond to art as well as to be actively involved in its creation. The two areas of response and creation are so interconnected that their separation for clarification sometimes appears artificial. Making judgments about one's own work or the work of others should be a natural part of an art experience rather than tacked on as a superficial adjunct. Examples of historical and contemporary fine art and folk art can be used to motivate students in their understanding of their own work and their place within the evolution of human involvement with images. Students should be proud of their own cultural heritage and be provided with opportunities to respond to their own work and the work of their peers.
When talking about art the student is making judgments based somewhere on a continuum between fact (for example, "The picture has many blue lines") and personal opinion (for example, "I like it because it reminds me of rough waves."). This is where art analysis and commentary are useful in directing discussion. It divides viewing and talking about art into three main phases.

Children respond to art by:

1. **Describing images** (own, peers, and that of other artists):
   - List and describe objects and symbols seen in a picture.
   - Identify and describe kinds of colors, textures, lines, shapes, and sizes.
   - Identify and describe methods such as: drawing and painting, print making, textiles, modeling, carving, and construction.

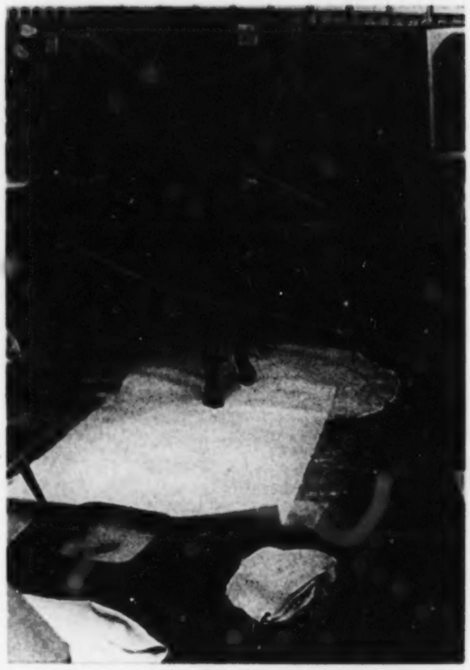
2. **Interpreting images** (own, peers, and that of other artists):
   - View and discuss images that focus on a feeling or an emotion.
   - Describe how an image makes one feel.
   - Explain an image in one's own words.
   - View and discuss images that tell a story.
   - Identify specific elements and principles of design that communicate a feeling.
   - Identify specific elements and principles of design that contribute to the image as a whole.
   - Associate images with personal experiences.

Children stop when they are satisfied with what they have produced. To ask a child who has stopped working to add to what has been created or to evaluate the item for reworking would violate the child's integrity.

Lasky & Mukerji, 1980

3. **Using descriptive and interpretative information to judge images** (own, peers, and that of other artists):
   - State and explain preferences for favorite images.
   - Explain why an artist's selection of materials, processes, and images is successful.
   - Establish criteria for deciding which works might be included in a display, for example, best own work.

The purpose for discussing art is not to make everyone arrive at the same conclusions. The intent is to increase the sum of values and satisfaction a student derives from art. Learning to describe, interpret, and judge art helps the student to become a more involved consumer, and creator of art. In responding to their own work and to that of others, students bring together learning from developing images, the use of materials and processes, and an understanding of the elements and principles of design.



The primary response to artwork should be the child's. Adult responses to art should be directed by the three phases described above. It is important to refrain from making personal judgments about children's work or to interpret it for the child. Children must be allowed to develop their ability to reflect and value their work, free from the powerful constraints of adult opinion.

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Descriptors of Learning in Dance

Early Primary	Later Primary
Dispositions	
The child: ▪ Participates in dance-making (for example, selects and extends personal movement to express a feeling or idea) ▪ Participates with enthusiasm in movement, shares personal dance work with others (for example, describes how dance feels, spontaneously shares and discusses personal dance work and the dance work of others)	The child: ▪ Creates moods, expresses feelings and personal images through movement (for example, improvises and refines personal dance compositions to express ideas or solve problems) ▪ Observes and discusses dance in the school, community, and on media networks; develops personal preferences in dance work (for example, attends and reflects upon school dance performance or community recital, watches and discusses a ballet on television, selects preferred movement sequences or styles)
Skills	
The child: ▪ Extends own natural movement by using a variety of ways to move (for example, varies body shape, uses a variety of levels, body parts, personal space) ▪ Moves in response to rhymes, verbal, and visual image (for example, "Move as if…") represents image from a poem through dance, moves in response to design elements in a picture.	The child: ▪ Explores a variety of ways of moving through the elements of dance: body, dynamics, space, relationships (for example, uses control, personal and general space, variation in dynamics, levels, energy) ▪ Responds to movement with verbal and visual images and metaphors (for example, writes about feeling or character expressed in a dance, makes visual pattern that follows dance form, describes movement)

Descriptors of Learning in Dance

Early Primary	Later Primary
Knowledge	
The child: ▪ Explores body awareness through movement (for example, explores weight-bearing and balance using various body parts) ▪ Describes similarities, differences, and relationships in dance (for example, uses contrast, repetition in movement) ▪ Imitates and repeats observed movement patterns (for example, remembers earlier movements to use in later sequences, individually or in groups) ▪ Responds through movement to movement skills vocabulary (for example, represents correctly, "run backwards," makes choices from general instruction "use a different way of moving across the room")	The child: ▪ Develops and extends kinesthetic awareness in movement (for example, develops an understanding of the way in which movement occurs) ▪ Explores and observes form in dance (for example, creates short dance sequences based on simple musical forms (A B A or A B) ▪ Remembers and uses in later dance work observed dance sequences (for example, uses observed movement sequences in own compositions and ensemble work) ▪ Describes own work and that of others with appropriate terminology (for example, discusses movements which are common in everyday life, discusses own dance work and that of others)

Descriptors of Learning in Theater

Early Primary	Later Primary
Dispositions	
The child: ▪ Participates in collaborative classroom theater (for example, works with others in theater, concentrates on the activity, responds to stimuli by creating mental image)	The child: ▪ Contributes to collaborative classroom theater (for example, accepts and responds to the images of others, uses the voice to convey mood, emotion, and meaning)
▪ Responds to own works and to theater performances (for example, observes performances which represent a variety of dramatic forms)	▪ Recognizes and respects the emotional and intellectual responses of others (for example, discusses aspects of the theater which lead to emotional response)
▪ Makes judgments about the theater performance (for example, expresses personal reactions)	▪ Makes judgments about dramatic performances (for example, considers own responses and those of others when forming opinions)
Skills	
The child: ▪ Assumes a role (for example, takes on a role by responding as if another person)	The child: ▪ Maintains commitment to a role (for example, uses language and gesture to communicate appropriate thoughts and attitudes in role)
▪ Accepts a role (for example, listens and responds to others in role)	▪ Accepts and supports others in role (for example, develops situation in role by building on own ideas and on those of others)
▪ Leads into role by building belief structures (for example, participates in discussion, imaging, pretending to build a context for role.)	▪ Develops an increasingly sensitive awareness of role (for example, participates in building the context for role in the drama)
▪ Discriminates between being in and out of role (for example, identifies self in relation to others, thinks about self and place within the drama.)	▪ Changes language in role, using language appropriate to the role (for example, includes verbal style and appropriate vocabulary)

Descriptors of Learning in Theater

Early Primary	Later Primary
Knowledge	
The child:	The child:
▪ Expresses ideas and emotions through body movement (for example, responds to story through movement, individually and in a group; develops ideas and feelings in a still picture [tableau])	▪ Interprets ideas and emotions through body movement and tableau (for example, expresses feelings and ideas through movement, works with others to represent ideas in series of tableau images)
▪ Thinks about the theater (for example, thinks about own experience within the drama activity, presents own reflections in discussion or through painting and writing)	▪ Reflects on feelings, ideas, and issues raised in the theater experience (for example, considers the points of view raised in the theater experience demonstrates change in thoughts and feelings)
▪ Explores the interconnectedness of dance, theater, music, and visual art (for example, uses dance, music, and visual elements in drama work)	▪ Integrates learnings from dance, music, visual art, and previous theater work (for example, uses dance, music, and visual elements to enhance meaning and enrich the theater experience)

Descriptors of Learning in Music

Early Primary	Later Primary
Dispositions	
The child:	The child:
▪ Responds to different cultural traditions and celebrations through music (for example, uses seasonal songs, celebrates music from cultures in America)	▪ Compares different kinds of music in the community and on public media networks (for example, selects appropriate examples to share in class, discusses local music event)
Skills	
The child:	The child:
▪ Represents personal vocal sounds using speaking and singing voice (for example, uses high/low sounds, repeated pitch, creates interest in speech, gains awareness of own accuracy in pitch)	▪ Sings in tune within a comfortable range (for example, sings in tune within the following range, with emphasis on the upper part of the range)
▪ Performs simple songs, rhythm chants, and fingerplays (for example, uses song materials to gain awareness of beat and rhythmic and melodic concepts, keeps beat using simple percussion instruments and movement)	▪ Contributes to musical activities both individually and in groups (for example, expresses mood, tempo, timbre, dynamics, rhythm, and melody in music, uses percussion instruments, movement, and voice in combination)
▪ Explores differences in timbre of instruments and voices (for example, explores the differences among wood, string, metal, skin, and vocal timbres)	▪ Uses different instruments and voice to create and perform rhythmic and melodic ostinato (for example, uses repeated rhythmic or melodic patterns to accompany known songs)
▪ Responds to musical phrase, tempo, dynamics through body movement (for example, observes pattern in music, beginnings and endings, differences in dynamics)	▪ Expresses musical phrases, variation in tempo and dynamics through contrast (for example, varies loud/soft or through body gestures, group/solo alternation, etc.)

Descriptors of Learning in Music

Early Primary	Later Primary
Skills	
The child: - Represents music through simple notation (for example, high/low placement on staff, beats, simple rhythm patterns, rests)	The child: - Uses appropriate music vocabulary and notation with understanding (for example, quarter note and rest, time signature, eighth note and rest, etc.)
Knowledge	
The child: - Communicates personal ideas through music (for example, represents personal ideas and images through singing and playing simple rhythmic and melodic instruments) - Responds to similarities, differences, and relationships in music (for example, discusses and responds through movement to repetition in songs, different instrumental qualities, variations in mood) - Recognizes that music can express different emotions and moods (for example, responds to mood contrast through movement, verbal or visual images)	The child: - Expresses images through music and sound (for example, using voice and selected classroom instruments, creates and develops own musical images) - Expresses musical elements through their parallels in other art forms (for example, dramatizes musical sequence, transforms musical form as visual art design or musical contour as dance) - Expresses personal preferences in music and appreciates the musical preferences of others (for example, discusses a variety of music, giving reasons for preference)

Descriptors of Learning in Visual Art

Early Primary	Later Primary
Dispositions	
The child:	The child:
▪ Interprets own feelings about an image (for example, "It makes me feel sad.")	▪ Interprets ideas and feelings expressed by an image (for example, "It makes me feel happy because of the bright colors.")
▪ Responds sensitively to a variety of different art forms from own and other cultures (for example, communicates a willingness to view and discuss a variety of art work)	▪ Responds sensitively and informatively to a variety of different art forms from own and other cultures (for example, creates own image in response to a festival or celebration)
▪ Evaluates images by stating personal preference (for example, "I like this one the best.")	▪ Evaluates images by stating preference and giving reasons (for example, "This is best because the colors create a feeling.")
Skills	
The child:	The child:
▪ Creates images through use of visual symbols (for example, paints a picture of a person and a house with use of personal schema)	▪ Creates images from different sources such as observation, memory, imagination (creates an observational drawing of a pet)
▪ Expresses ideas in visual form (for example, uses drawings to tell a story)	▪ Expresses ideas and feeling in visual form (for example, paints a picture expressing scariness)
▪ Creates images inspired by self or others (e.g., constructs a sculpture on monster theme)	▪ Creates image inspired by self or other art forms (for example, constructs a collage inspired by theme of a poem)
▪ Represents images in different ways (e.g., draws, models, paints, constructs, and uses textile and print making processes)	▪ Represents images in different ways with increasing skill (for example, draws, paints, models, constructs, textile and print making)
▪ Uses a variety of simple art making tools and materials (for example, uses brushes and paint to create patterns and pictures)	▪ Uses a variety of simple art making tools and materials appropriately (for example, cuts paper and shapes with scissors)

Descriptors of Learning in Visual Art

Early Primary	Later Primary
Skills	
The child: ▪ Displays skill in manipulating simple materials and processes (for example, uses brushes and paint to create patterns and pictures)	The child: ▪ Displays increasing sophistication in manipulating simple materials and processes (for example, chooses various paper types that suit image in making a collage)
Knowledge	
The child: ▪ Explores elements of design in making or responding to art (for example, names elements [lines, colors, textures, shapes] and recognizes qualities) ▪ Describes images by attending to the subject, sensory, and formal qualities—elements and principles of design and method and technique-(for example, identifies and describes textures in a weaving)	The child: ▪ Uses and discusses different elements and principles of design (for example, describes own art in terms of color, pattern, and balance) ▪ Describes images by attending to the subject's sensory and formal qualities—elements and principles of design, and method and technique-(for example, discusses implied textures and how they might have been made in a painting)

Social and Emotional Development in the Primary Program

Guest Author, Dr. Lilian G. Katz

The development of children's emotional and social competence—both well underway since birth-deserve central concern throughout the primary years. These two aspects of development are closely linked to each other. A number of studies have shown for example that understanding and empathizing with others' feelings and being socially competent go hand in hand. In fact, they are so intertwined that it is difficult to discern which of them comes first (Saarni, et al. 1998).

Widely-Held Expectations

As shown in the Widely-Held Expectations, Section V, a broad range of widely-held expectations for emotional and social development during the preschool and primary years is listed. Many of them are included in the concept self-esteem as well.

Good experiences in the primary grades can make a substantial positive contribution to the realization of these expectations. Although neither emotional nor social competencies are learned from formal instruction or exhortation, teachers can help children with both aspects of development in a variety of ways. Similarly, optimal self-esteem is not acquired through instruction; but teachers and many of the experiences they provide (as well as prevent) can make a major contribution to its development.

The Development of Emotional Competence

The development of emotional competence is a highly complex process. Though difficult to define, specialists generally define it as consisting of awareness of one's own and others' feelings, the capacity to empathize with others' emotional states, to distinguish between inner feelings and outward expression of them, and awareness of the place of emotions in relationships (Saarni, 1999). It includes also gradual mastery over one's feelings so that they are strong enough to provoke action and interaction, but not so strong as to be overwhelming to the child or to be so intense as to provoke wariness among peers. A growing body of research indicates that 'emotion regulation,' commonly referred to as 'impulse control,' is one of the most critical developmental accomplishments of the first five or six years of life (Gross, 1998).

Children usually experience positive emotions when they are comfortable among their peers. Negative emotions are likely to reduce their chances of building close relationships with them. Furthermore, studies indicate that positive emotions contribute substantially to a child's openness to all the kinds of learning that matter during the early primary years (Frederickson, 1998).

The Development of Social Competence

Evidence has been accumulating for several decades to indicate that children who cannot find a good place for themselves in their peer group are significantly more likely than their more socially competent peers to experience difficulties with their academic work and to drop out of school (Ladd, et al. 1999). Indeed, W. W. Hartup asserts that peer relationships contribute a great deal to both social and cognitive development stating that:

> Indeed, the single best childhood predictor of adult adaptation is *not* IQ, *not* school grades, and *not* classroom behavior but, rather the adequacy with which the child gets along with other children. Children who are generally disliked, who are aggressive and disruptive, who are unable to sustain close relationships with other children, and who cannot establish a place for themselves in the peer culture are seriously "at risk" (Hartup, 1992).

In addition to difficulties in school, the risks include later problems with employment, parenting, and other important aspects of adult life.

Like the development of emotional competence, the achievement of social competence is also a complex aspect of human behavior. Social competence is usually defined as the capacity to initiate and maintain satisfying relationships with peers, as well as to be able to form friendships with some of them (Katz & McClellan, 1997). According to Hartup (1992), the "essentials of friendship are reciprocity and commitment between individuals who see themselves more or less as equals" (p. 2).

The components of social competence include knowledge, skills, dispositions, and of course, feelings (Katz, 1995). *Social knowledge* refers to the children's understanding and conceptualizations of such things as others' points of view, interests, desires, motives, preferences, and so forth. *Social skills* include such interpersonal strategies as how to approach others, to initiate interaction with others, how to take turns, to handle disagreements, resolve conflicts, express one's preferences, articulate one's wishes, and many others. Positive *social dispositions* include the dispositions to be open, receptive and accepting of others, to seek companionship, to be generous, cooperative, humorous, patient, and so forth. Many *feelings* or emotions that are part of emotional competence are involved in social competence. For example, the capacity to feel empathy, to take pleasure in companionship, to feel affection toward others and to care about them, are essential aspects of the give and take of social interaction throughout life.

The Teacher's Role in Emotional And Social Development.

Teachers can play a significant role in fostering children's emotional and social growth. For many children they are powerful models of human competencies. The teacher also provides contexts which can maximize the expression of positive behavior and feelings, and can minimize those experiences that may interfere with healthy emotional and social growth and self-esteem.

Teachers as Models.

Teachers can provide very significant, visible, and observable models of emotionally and socially competent behavior. Children learn as much about what is expected and desired by adults by watching how they interact with others as they do from their own direct interactions with their teachers.

A teacher's respect for all the members of her class, her openness to and acceptance of the diversity of races, cultures, personalities, preferences and opinions in the group, and her sensitivity to their feelings and wishes are all readily observed by the children in the class. Respecting and accepting all the ways in which a group of young children may vary does not mean being indulgent or intimidated by the children's wishes and demands. Rather, it means that the teacher acknowledges that there are many different points of view and at the same time expresses her own views concerning what behavior is valued and expected both respectfully and firmly.

Providing Contexts for Positive Emotional and Social Experiences

Teachers can contribute to social and emotional development by providing contexts in which children have ample opportunity to experience positive emotions and to learn to manage negative ones. Frederickson (1998) suggests that positive emotions are best thought of as "families of feelings" that vary in intensity. These would include joy, contentment, interest, satisfaction, relief, and various kinds of caring, love or pleasure in the company of certain others. Frederickson further argues that such experiences "build intellectual resources," whereas negative emotions are likely to block intellectual learning (1998, p. 310).

The class as a community of learners. A community is a group of individuals who feel and believe they have a stake in each other's well being and who accomplish by working together what they could not do alone. A primary classroom is experienced as a community when the children have ample opportunity to experience the kinds of satisfaction and pleasure that come from working for common goals. These experiences could include solving problems together, creating a range of products related to their learning, overcoming obstacles in the course of this work, as for example when children cooperate in projects involving investigations of worthwhile topics and purposes (Katz & Chard, 2000).

Teachers can also help strengthen the sense of community by encouraging children to offer each other suggestions and advice, to express their appreciation of each others' efforts, and by helping children to interpret their classmates' wishes and ideas accurately. For example, in the course of working on projects in small sub-groups within a class the teacher encourages children to prize and capitalize on the differences in experiences, interests and aptitudes within the group so that they see themselves as enriched by their differences. Furthermore, as sub-groups of children work on various aspects of an investigation they can learn how to argue, to defend their position in a disagreement, and to try out strategies by which to resolve them.

During the primary years children's emotional and social growth are also enhanced by providing appropriate opportunities to discuss and develop agreements on what ground rules they want their class to observe. Periodic evaluations of their appropriateness and effectiveness can strengthen their sensitivity to the complexities of group life and to the benefits of constructive discussion of them.

Protecting the Rights and Needs of Each Individual in the Class

Occasionally one or two children in a class behave in ways that undermine the well-being of others. Children who behave in this way are often called bullies or referred to as bossy. In both cases the teacher has a significant role to play in helping both the aggressors and the aggrieved to deal with the problems these patterns of behavior can cause.

First, the teacher makes it clear in a firm and matter-of-fact way that he/she does not approve of the behavior. Second, she or he indicates to the victims how they can respond with firmness and dignity to the occasions of victimization. It is well-documented in research that bullies—and bosses—are very selective about their victims; they don't pick totally passive children, but rather they choose children who show clear distress and frustration during the bullying incidents. The teacher can indicate to the victims the tone of voice and phrasing to use when resisting the aggressor that reflects confidence as well as gracefulness. Thirdly, the teacher takes every possible opportunity to develop a relationship with the aggressors *about other aspects of their work and class participation* that have no relationship to their undesirable behavior. In this way such children are less likely to invest their whole identity in the peer group on their negative behavior.

Studies of self-attribution processes in children indicate that many children prefer to have a negative reputation in their peer group than no identity at all. Teachers help a great deal when they use real opportunities for such children to try out other roles within the peer group.

Recent research indicates that 'relational aggression' more often observed in girls than boys can also undermine the emotional and social well-being of the class. "Relational aggression includes attempts to exclude peers from group participation, besmirch another's reputation, and gossip about another's negative attributes" (Coie & Dodge, 1998, p. 791). When a teacher suspects that such relational aggression is occurring she can help by making it clear in a firm and matter-of-fact way that she disapproves of the behavior, by teaching the victims how to respond gracefully and confidently in such incidents, and by forming a relationship with the perpetrator centered on completely different aspects of their participation in the life of the class.

On the basis of the accumulated evidence now available, there is good reason to believe that young children who do not overcome social difficulties by the end of the early primary years experience many difficulties later. They are significantly more likely to have difficulties with achievement, to drop out of school, to find satisfactory employment, and to develop their own family relationships later in their lives. There is also evidence to suggest that children who do not overcome early rejection by their peers eventually find each other and they gain feelings of solidarity, loyalty, and belonging they missed in the early years based on their shared hostility and rejection of the rest of society. Thus, failure to help such children can have very long-term consequences for the children-as well as for the rest of society.

The Development of Self-Esteem

The development of self-esteem has long been of concern to primary school educators. Self-esteem is linked to both emotional and social competence. Though it is difficult to define, most specialists agree that self-esteem refers to the way individuals appraise themselves or 'estimate' themselves on a set of criteria that are learned very early at home and are also deeply embedded in their cultures.

The concepts of self and self-esteem vary among cultures in terms of the personal attributes that serve as criteria against which to appraise oneself. Western cultures tend to count such personal qualities as independence and self-reliance as important criteria against which to evaluate the self. However, many Asian and other non-Western cultures' criteria for self-appraisal include self-restraint, modesty, and connectedness with others.

As children grow beyond the preschool years and spend increasing proportions of time outside of the family context, the larger society imposes criteria upon which self-appraisal is based. With increasing age, however, children begin to internalize the criteria of self-worth they pick up in environments outside of the family, and a sense of the standards to be attained on the criteria from the larger community they observe and in which they are beginning to participate.

The Cyclic Nature of Self-Esteem

Optimal self-esteem is associated with such feelings as cheerfulness, optimism, and relatively high energy. High self-esteem is associated with high energy, which increases effectiveness and competence, which in turn strengthen feelings of self-esteem and self-worth. Low self-esteem is typically accompanied by feelings of doubt about one's worth and acceptability, and with feeling forlorn, morose, or even sad. Such feelings may be accompanied by relatively low energy and weak motivation, invariably resulting in low effort. The low effort gives rise to increasing doubts about one's ability and acceptability in a way that further inhibits effort and accomplishment. In this way, feelings about oneself constitute a *recursive cycle* such that the feelings arising from self-appraisal tend to produce behavior that strengthens those feelings-both positive or negative.

The cyclic nature of self-esteem is similar to Bandura's (1989) conception of *self-efficacy*, namely, processes by which perceptions of one's own capacities and effective action "affect each other bi-directionally" (p. 1176). In other words, effective action makes it possible to see oneself as competent, which in turn leads to effective action, and so forth. The same cycle applies to self-perceptions of incompetence. However, Bandura (1989) warns that

> A sense of personal efficacy [does] not arise simply from the incantation of capability. Saying something should not be confused with believing it to be so. Simply saying that one is capable is not necessarily self-convincing, especially when it contradicts preexisting firm beliefs. No amount of reiteration that I can fly will persuade me that I have the efficacy to get myself airborne and to propel myself through the air (p. 1179).

This formulation of the dynamics of feelings about the self confirms the view that self-esteem merits the concern of educators as well as parents. Nevertheless, it also casts some doubt on the frequent assertion that, if children are somehow made to "feel good about themselves," success in school will follow. In other words, just because young children need to "feel good about themselves," telling them that they are special (e.g., because they can color) or that they are unique, and providing them with other similar flattery may not cause them to believe they are so; nor is such empty flattery likely to engender good feelings about oneself (Katz, 1995).

Dunn's (1988) view of the nature of self-esteem is that it is related to the extent to which one sees oneself as the cause of effects. She asserts that "the sense of cause [is] a crucial feature of the sense-of self" and the essence of self-confidence is the feeling of having an effect on things and being able to cause or at least affect events and others. On the other hand, feeling loved by the significant others in one's environment involves feeling and knowing that one's behavior and status really matter to them—matter enough to cause them to have real emotion and to provoke action and reaction from them, including anger and stress as well as pride and joy. Thus when a teacher speaks firmly to a child about how his work might be improved the child is often getting a message of the teacher's caring about the child and his or her progress.

When academic achievement, symbolized by grades, becomes a major criterion of self-esteem, then one's own self-esteem can be boosted by finding others with whom to compare oneself favorably. That is to say, children can develop a vested interest in finding individual classmates or groups to look down on. If, for example, parents and schools convey to children that their self-esteem is related to academic achievement as indicated by grades and test scores, then a significant proportion of children must have low self-esteem-at least on that criterion. In such a school culture the development of cooperation and inter—group solidarity becomes very problematic.

An adaptive response of children at the low end of the distribution of academic achievement might be to distance themselves from the school culture. Such children may strive to meet other criteria of self-esteem, such as the criteria of various peer groups, that may or may not enhance participation in the larger society. This suggests that schools and classes are most likely to help by balancing the curriculum so that sufficient contexts are provided in which all participants can contribute to group efforts, albeit in individual ways. A substantial body of research indicates that cooperative learning strategies and cooperative goals are effective ways to address these issues (see Ames, 1992). The work accomplished in these group contexts should be held to the same high standards that apply to all their other work in the class.

In sum, if children learn to base their self-appraisals on favorable comparisons of themselves with others, then the identification of inferior others-whether individuals or groups-may become endemic in a society. When the two tendencies-to base self-esteem on characteristics that are present at birth and to elevate one's self-appraisal by identifying others who are inferior on any given criterion-occur together in a society, conditions develop which are likely to support prejudice and oppression.

The most important way in which teachers support children's self-esteem is to esteem them. That means giving children opportunities to take initiative, to make some choices and decisions, and to express their views in a respectful and accepting environment. Self-esteem is also strengthened when praise is used seriously and genuinely, which is only possible when it is used sparingly.

Conclusion

Since almost all important learning occurs in the company of others setting the stage in support of children's emotional and social development is as much a part of the teacher's role as is the curriculum itself. Nevertheless, it is a good idea to keep in mind that some of the social and emotional difficulties experienced by children cannot be addressed by a teacher within the classroom and may need the assistance of specialists.

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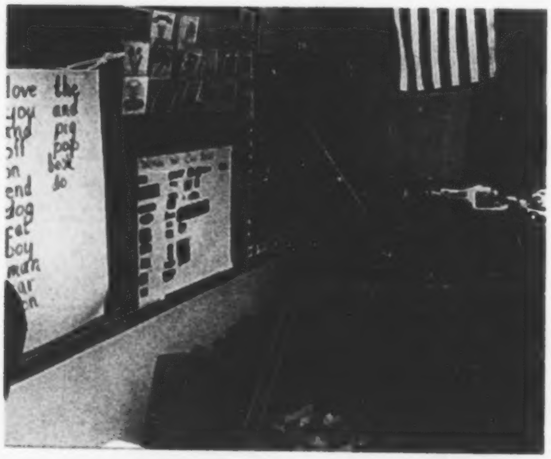

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Language Arts in the Primary Program

Common Understandings

"Learning to read and write is one of the most important and powerful achievements in life. Its value is clearly seen in the faces of young children—the proud, confident smile of the capable reader contrasts sharply with the furrowed brow and sullen frown of the discouraged non-reader. Ensuring that all young children reach their potentials as readers and writers is the shared responsibility of teachers, administrators, families, and communities. Educators have a special responsibility to teach every child and not to blame children, families, or each other when the task is difficult. All responsible adults need to work together to help children become competent readers and writers." (NAEYC, 1998). These adults must share basic understandings not only about reading and writing, but also about language, curriculum, assessment, and learning in order to support children completely.

The language arts program is inclusive of children with limited English proficiency, special needs, and high ability. The general information that follows is provided with diversity in mind, however certain sections are devoted to these special populations. All of the information is applicable to any given situation or group of students. It is up to the teacher to decide how to organize the classroom to match and support the diversity of students.

Understanding Language

Understanding language in its broadest sense encompasses oral, written, and visual modes. Each mode is both receptive and expressive as shown in the chart below. Children learn language, learn about language, and learn through language in a simultaneous, integrated fashion. Thus, language develops through use and, like thinking, is a process that embraces all curriculum areas.

	Receptive	**Expressive**
Oral	Listening	Speaking
Written	Reading	Writing
Visual	Viewing	Representing

Understanding Curriculum

Understanding curriculum requires that the purposes of the language and literacy program are clear and focused (see descriptors of learning). The purpose of the language arts program is to develop children's reading, writing, speaking, and listening abilities while enabling children to use language for acquiring knowledge, communicating with others, and for enjoyment. Skills, such as phonics, word recognition, capitalization, and punctuation, are taught in meaningful ways. As children use language in functional ways they develop an understanding of what language is and how it works. The language arts program should help children to:

- Understand that communication is a process of conveying meaning to a particular audience for a particular purpose
- Understand that the language modes are interrelated
- Know and understand a variety of language forms (oral, written, visual)
- Understand that the language of print is different from the spoken language.

Daily activities such as the following should be provided for children to use their listening, speaking, writing, spelling, and reading abilities.

- Experiences of being read to and independently reading meaningful and engaging stories and informational texts
- Writing experiences that allow the flexibility to use non-conventional forms of writing at first (invented spelling) and, over time, move to conventional forms (Snow, Burns, & Griffin, 1998)
- Opportunities to work in small groups for focused instruction and collaboration with other children
- An intellectually engaging and challenging curriculum that expands knowledge of the world and vocabulary
- Significant amounts of time for drawing, dictating, and writing about experiences
- Planning and implementing projects involving research at suitable levels of difficulty
- Discussing readings
- Conducting interviews
- Publishing writing in student made books and other formats
- Listening to recordings while following along with the print
- Using the school media center and classroom reading areas regularly
- Participating regularly in singing, choral reading, paired reading, and sustained silent reading
- Using literacy skills while working on science, social studies, mathematics and other content areas
- Using appropriate technologies for all of the above (word processing, internet resources, multimedia).
- Develop awareness of how authors organize text and supportive illustrations to create meaning and use these concepts in creating and expressing their own meaning

Understanding Assessment

Accurate and effective assessment of children's knowledge, skills, and attitudes in reading and writing helps a teacher more accurately match instructional strategies with how and what the children are learning. Both formal and informal assessments are necessary to gain a complete picture of each child's strengths and areas of need.

Effective assessment makes it possible for teachers to:

- Monitor and document children's progress over time
- Ensure that instruction is responsive and appropriately matched to what children are and are not able to do
- Customize instruction to meet individual children's strengths and needs
- Enable children to observe their own growth and development
- Identify children who might benefit from more intensive levels of instruction, such as individual tutoring, or other interventions (Neuman, Copple, & Bredekamp, 2000).

In addition, it has become quite apparent that one measure cannot be the main source for evaluating a child's progress. Rather than testing children, we need to assess their performance for growth in many areas and under many conditions. Assessment should help the teacher, child, and parent determine the child's strengths and weaknesses and plan appropriate instructional strategies

Morrow, 1997

Understanding Instruction

Learning to read and write is an interactive, complex and multifaceted process that requires a variety of instructional strategies and approaches. While the child is the one actually engaged in the construction of knowledge, it is critical that teachers and parents maintain a supportive and instructive role in the process (Snow, Burns, & Griffin, 1998 and Neuman, Copple, & Bredekamp, 2000). Support for children can range from direct or explicit instruction to exploration opportunities where they interact and engage with meaningful, literacy-based materials. Instruction is based on careful selection of teaching and learning strategies that match the needs of individual or groups of children with the specific skills being taught.

To increase student success in literacy development, the National Association for the Education of Young Children and the International Reading Association (1998) have called for a shared responsibility of schools, early childhood programs, families, and communities. Goals for reading and writing in the early years must be challenging but achievable, with sufficient adult support. This includes teachers setting appropriate literacy goals and then adapting instructional strategies and decisions upon their knowledge of reading and writing, current research, and the individual child's strengths and needs.

Just plain reading has been shown to improve student's comprehension, even as measured on standardized tests.

Pearson, 1993

Understanding Learning

What a child knows about print depends upon the richness of the environment and the responsiveness of the adults. Children develop their own language skills successfully when the adults in the environment share these beliefs about learning:

- Children's language flourishes when specific **conditions of learning** are present (Cambourne, 2000, 1989).
- Children need a strong **foundation** before formal instruction can be effective (Cummingham, 1995 and Cunningham & Hall, 1994).
- **The child's brain** seeks meaning first, looking for whole-part-whole relationships (Jensen, 1998).
- Children pass through typical **stages of development** when learning to use language.

Conditions of Learning

An effective language arts program engages the learner. "Engagement … has overtones of attention; learning is unlikely if learners do not attend to demonstrations in which they are immersed. However, attention is unlikely if there is no perceived need or purpose for learning in the first place. Engagement also depends on active participation by the learner, which in turn involves some risk taking." (Cambourne, 1995). Adults can provide specific conditions in any setting and in any culture from home to school that will engage children in using and developing language.

In thirty years of research Brian Cambourne has studied complex learning in a variety of settings across many cultures. One outcome of this research is the identification of a set of conditions that always seem to be present when language is learned

Teachers are encouraged to examine their classroom practices for evidence of the conditions and to build them in to their lesson plans, classroom routines and daily instruction. The following chart is designed as a worksheet for that purpose.

Observing in the Classroom for Conditions of Learning

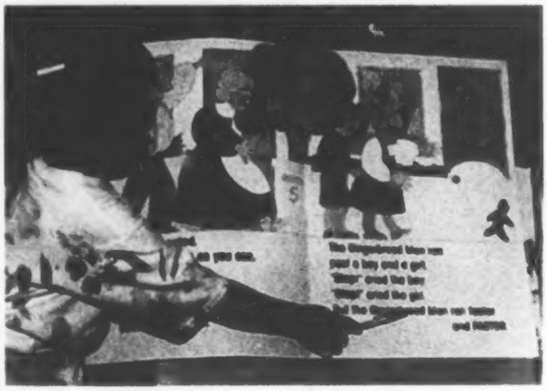
Condition	**I see this in my classroom…**	**I see children doing this…**	**I see adults doing this…**
Immersion			
Demonstration			
Expectation			
Responsibility			
Approximation			
Use			
Response			

Conditions of Learning Summary

Condition	Description	Adult Responsibility	Example
Immersion	Children are immersed in language. The language that saturates them is available and always meaningful.	I will provide lots of time for children to talk, listen, read, and write about things of interest.	➢ Discussions ➢ Read alouds ➢ E-mail ➢ Shared writing ➢ Collaboration
Demonstration	Demonstrations are the raw material of all learning. The young learner uses the information to figure out how language is used.	I will provide children with many models of language use. They will know language is important when they see me reading, writing, speaking, and listening.	➢ Discussions ➢ Read alouds ➢ Modeled writing ➢ Guided reading ➢ Word processing
Expectation	Children are more likely to engage in learning with those who hold high expectations for them.	I expect children to learn to talk, read, and write. There is every reason to believe children will succeed. Learning is not negotiable.	➢ Flexible grouping ➢ Collaborative reading and writing ➢ Computer use for all children
Responsibility	Children select and make use of language demonstration. The child decides when learning will be internalized.	I will give children options for using language, always providing and expecting high quality choices.	➢ Learning centers ➢ Planning boards ➢ Variety of materials ➢ Trusting children to learn
Approximation	Children's attempts are celebrated and valued. Adults and children are aware of stages of development.	I will understand the stages of language development and know that learning is never fixed, but always changing and growing	➢ Use invented spelling for assessment ➢ Flexible skill groups ➢ Assess by measuring what children can do, not what they can't do.
Use	Children have time and opportunity to practice what they have been learning and apply it to their own purposes.	I will have daily conversations with children. I will make sure that books, paper, writing materials, music, and other forms of language are readily available to children.	➢ Writing centers ➢ Technology access ➢ Classroom libraries ➢ Opportunities to research topics of interest.
Response	Adults respond to children with genuine communication and caring. They supply children with missing bits of information through example.	I will focus on what the child is trying to communicate. I will work with children on skills and strategies for improving communication and understanding. I will model my own learning process.	➢ Genuine conversations ➢ Modeled reading and writing ➢ Interactive writing ➢ Skills taught with a purpose in mind ➢ Talk aloud

The Foundation

In classrooms where the conditions of learning are present, children are already exposed to an environment which supports a foundation for future language learning. Even so, it is essential that the teacher thoughtfully watches each child for evidence of an adequate language foundation. Before formal instruction in the skills of reading and writing can be effective, several components must be present (Cunningham, 2000). Many children acquire this foundation at home, however it cannot be left to chance. It is the responsibility of the classroom teacher to structure programs that provide for all children and to do so in ways that are as close to the home experiences as possible. There are children in every primary classroom who still need to develop understanding of:



- *What Reading and Writing are For*
  Ask your students, "Why are you learning to read and write?" Some will give real world answers, others will give school world answers. The latter group doesn't see reading and writing as part of their real world and may not have the same drive and motivation as children for whom reading and writing are perceived as skills everyone uses.
- *Print Tracking and Jargon*
  Watch your children to see if they make sweeps with their eyes from left to right and top to bottom. Children who cannot relate pictures to words or talk about print using terms such as word, letter, sentence, and sound may be hopelessly confused by "school talk" about reading. All children need to be comfortable with these basic concepts before they can learn to read and write.
- *Phonological Awareness*
  Children cannot use phonics (connecting sounds to symbols) until they have a strong sense of phonological awareness (the ability to manipulate sounds). Making rhymes and playing with words is one of the most powerful indicators that children are getting control of language. They are becoming aware of words and sounds and can manipulate these to express themselves and to impress others. Nursery rhymes, chants, seeing print being read aloud, reading books over and over again, and using inventive spellings are all important in developing a strong sense of phonological awareness.
- *Some Known Words*
  Many first graders can read and write some words. Usually the words they have learned are words that are important or of high interest to them.
- *Some Letter Names and Sounds*
  Children may not know all twenty-six upper and lower case letters, but many children come to school knowing the most common letters. Letters in the child's name are the first to be used and recognized. Usually the letter names and sounds children know best are based on the words they can read and write, and they are learned best through repetition and meaningful use. Once children learn some letters, they should be encouraged to write them, to use them to begin writing words or parts of words, and to use words to begin writing sentences. Instruction should

be designed with the understanding that invented spelling is not in conflict with teaching correct spelling (Snow, Burns, & Griffin, 1998).

Every child has a right to experiences which build this basic foundation. If children lack these experiences at home, they must be provided at school with every effort made to increase opportunities for family literacy experience. "Children's concepts about literacy are formed from the earliest years by observing and interacting with readers and writers as well as through their own attempts to read and write" (Snow, Burns, & Griffin, 1998).

The Child's Brain

Human beings strive to use language in meaningful ways from the day of birth. Since research about the brain and how it is related to classroom practice is a very new science, there is not much that we know with absolute certainty. There are however, some basic principles emerging which seem to support the intuition of those who work with children every day. From the work of Eric Jensen, the following ideas from neuroscience apply to language development (Jensen, 1998):

- Infants whose parents talk to and interact with them more frequently and use bigger, "adult" words will develop better language skills
- Children who are read to twenty minutes per day acquire the language base needed for reading skills later on. All of the words acquired are contributing to the development of syntax, vocabulary, and meaning
- Children cannot derive meaning from print until they have sufficient life experience to match words and experience
- There is no absolute timetable for learning to read. Differences of three years are normal and can vary between the ages of four years and ten years without developmental delay.

Stages of Development

All human beings pass through common stages of development in oral language, reading, writing, and spelling, and continue to develop throughout life. Each person, however, exhibits unique qualities within these stages. Knowledge of these stages and how they are manifested in children's behaviors is essential for the teacher so he/she knows when and how to support movement within and between stages. Children vary widely during the primary years (see Widely Held Expectations), and it is critical for the teacher to be well versed when talking with parents about normal ranges of development. Further, knowledge of these stages can prevent misinformation about a child which could result in misdiagnosis and subsequently harmful instructional decisions. "Teachers must understand both the continuum of development and the children's individual and cultural variations. Teachers must recognize when variation is within the typical range and when intervention is necessary. Good teachers make instructional decisions based on their knowledge of reading and writing, current research, appropriate expectations, and their knowledge of individual children's strengths and needs" (NAEYC, 1998).

The following sections provide information about the stages of development in oral language, reading, writing, and spelling. Since developmental continuums provide valuable guidelines for assessment and instruction, some examples have been included in the following pages. Whether one uses the examples in The Primary Program, or finds another reliable source, the teacher must decide which format, vocabulary, and descriptors work best for the situation. (For additional sources of information on language development in this book see "Widely Held Expectations" and the "Descriptors of Learning" for Reading, Writing, Speaking, Listening, and Viewing).

Development of Oral Language: Speaking and Listening

Oral communication plays an important role in all aspects of the primary program. Although speaking and listening often appear in language arts curriculum guides as separate strands, their interdependence is clearly recognized. The "Listening/Speaking Scale" can be used to identify listening and speaking skills on a continuum of development.

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Listening/Speaking Scale
Date and Context of Observation:
Student should be observed in a group.
Please note the date and context of the observation.

Student Name ______________________________

Scale Score: Fall ______________________________
Spring ______________________________

	1 Emerging	2 Beginning	3 Independent	4 Experienced
Responsiveness	Listening • Focuses on own perspective with little or no awareness of other's perspectives Speaking • Offers little or no response to directions questions posed by others • May respond to directions questions with information that is generally unrelated to the topic or situation	• Demonstrates some awareness of other perspectives but is predominantly focused on own • Responds to some directions/questions posed by others. • Responds to directions questions at times with information that is relevant to the topic or situation.	• Demonstrates awareness and understanding of other perspective points of view • Responds to most directions questions. • Responds consistently to directions questions with information that is relevant to the topic or situation.	• Demonstrates understanding and respect for other perspectives/points of view. • Responds to all directions/questions and elicits additional information. • Responds consistently to directions/questions with relevant information and may extend response beyond what is asked.
Participation	Listening • Focuses attention when listening for a minimal period of time. Speaking • Participates minimally in discussion or not at all. • May raise questions or issues that are random or disconnected from the discussion. • May speak spontaneously without awareness of the need to take turns.	• Focuses attention when listening for a limited period of time. • Participates in discussion at times. • May raise questions or issues that are related to the discussion. • Takes turns and or shares the conversation with others at times.	• Focuses attention when listening for a significant period of time. • Participates substantively in discussion, allowing for the contributions of others. • Makes appropriate comments and or asks relevant questions. • Takes turns with others and shares the conversation.	• Focuses attention when listening for an extended period of time. • Participates fully and actively in discussion, encouraging the contributions of others. • Makes insightful comments and asks thoughtful questions. • Takes turns, shares the conversation, and holds the attention of others when speaking.
Clarity	Listening • Reacts to what others say in ways that may be unrelated to the topic or situation. Speaking • Demonstrates some awareness of audience by conveying ideas. • Communicates in a way that is difficult to understand. • Uses limited vocabulary.	• Reacts to what others say in ways that correspond to the meaning of the topic or situation. • Demonstrates awareness of audience; tries to connect to their interests. • Communicates in a way that is comprehensible. • Uses simple, repetitive vocabulary.	• Reacts to what others say in ways that indicate an understanding of the topic or situation. • Demonstrates an awareness of audience by connecting to their interests through explanation. • Communicates ideas clearly with some supporting details. • Uses descriptive vocabulary.	• Reacts to what others say in ways that show understanding and that may enhance the situation. • Demonstrates an awareness of audience by providing listeners with complete information and detailed explanations. • Communicates well-developed ideas clearly, elaborating with relevant details. • Uses lively and descriptive vocabulary.
Organization	Listening • Absorbs information with difficulty. Speaking • Communicates in a fragmentary or random manner. • Coordinates tone of voice and facial gestures with ideas occasionally.	• Absorbs information, but with little discrimination between what is relevant and irrelevant. • Communicates gist of the idea but may wander from topic, overall coherence is tentative. • Coordinates tone of voice and facial gestures with ideas.	• Absorbs relevant information and discriminates between what is and is not relevant. • Communicates main idea effectively, may make connections to other ideas. • Coordinates tone of voice, as well as facial and body gestures to convey meaning of ideas.	• Demonstrates keen awareness of what has been conveyed, discriminates sharply between what is and is not relevant. • Communicates ideas effectively in an organized and cohesive manner with meaningful connections. • Uses tone of voice, volume, pace, repetition, and gestures to enhance meaning of ideas.

From New York State Education Department. Early Literacy Profile. 1998.

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Speaking

Research confirms what we have long known about speaking; we speak far more than we write; effective speaking is extremely important in social and career functions; and we tend to take speaking for granted. A great deal of research and theory has focused on children's oral language development and on the instructional practices which can enhance that development. The following findings are important for understanding the developmental stages of speaking.

- By the time most children come to school, they have learned the articulation of sounds, grammatical structure, and the social uses of language. They also have acquired a large vocabulary related to their home language and culture.
- Speaking development moves from simple word combinations to more complete phrases and sentences. Familiarity, ease and confidence are developed through practice and experimentation. Oral language development is enhanced by encouragement and acceptance.
- Speaking development and cognitive development are closely linked. Both move from the concrete to the abstract, from egocentrism to socialization. Children's inner or private speech enables the development of internalized logical thought.
- Oral communication develops through interaction with peers and adults and, for the most part, children learn to use speech effectively without much systematic attention or instruction.
- Development of syntax and vocabulary springs from a functional base. Children understand what oral language is by experiencing what it does.
- Social norms at different ages influence the development of speaking competence:

The Science of Baby Talk

According to the American Association for the Advancement of Science, baby talk may sound like mere babble, but that doesn't mean infants aren't learning words. Here are some milestones in vocabulary development:

Approximate Age	**Milestone**
Birth to 18 months	Children learn one word every three days
7 ½ months	Children differentiate between sound-alike words (cut-cup)
Eighteen months	Children put together two word sentences
18 months to 30 years	People learn ten words a day or around 3,500 words a year
Thirty years +	Vocabulary building slowly continues, leveling off at about 80,000 to 100,000 words

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Age	Prevailing Influences*
Preschool/Primary	Home, family environment. Different kinds of family environments and cultures result in different ideas about what things can be expressed and how they are said.
Elementary	Peer group, home. Effects of school become apparent, but do not prevail in the peer and home settings.
Adolescence	Begin to recognize social values and prestige factors. Peers are largest influence over personal speaking habits.
High School	Able to modify language to reflect various norms.

*Television, music, and other forms of media are gaining power as a prevailing influence for all ages.

Listening

Listening, like reading and writing, is a process. Just as these processes are recursive rather than linear, so is the listening process. Both reading and listening involve the reception of material and employ many of the same underlying mental processes.

Listening is directly related to language development, learning and the total process of human interaction. Learning to listen is learning to understand and appreciate another's point of view, and this, for children as well as for adults, expands perceptions of the world. Children who are active listeners can internalize new ideas and thoughts and assimilate them with their own to form new thinking patterns.

Listening affects performance in all language and curriculum areas. Listening is often taken for granted because it is integral to every day activities in all areas of the curriculum. Children can acquire more effective listening skills where listening is recognized as an integral part of the curriculum.

Listening activities must have a purpose and a logical context. The child who is listened to comes to understand that what he or she says is important. Such children will be more likely to listen to others when expected, especially if they have learned that they can gain useful information from others.

Development of Reading, Writing, and Spelling

Learning to read and write is critical to a child's success in school and later in life. One of the best predictors of whether a child will function competently in school and go on to contribute actively in our increasingly literate society is the level to which the child progresses in reading and writing. The early childhood years—from birth through age eight—are the most important period for literacy development (Neuman, Copple & Bredekamp, 2000).

Reading, writing, and spelling develop together. Although the stages are presented separately in the outlines which follow, it is important that the teacher understands the relationship between the developing reader and the stages of spelling which appear in the child's written products. Inventive spellings reveal the extent of knowledge about letter/sound associations and language structure which, in turn, yields information about how the child approaches the reading task.

> *Learning to read is not something that happens after a stereotyped readiness period in first grade or kindergarten. Learning to read is the job of a lifetime. Two-and three-year-old children who are read to a lot begin their reading careers early. The day a child gets hold of a sentence pattern that works for him and reads it into the telephone directory or the Montgomery Ward catalog, or his daddy's newspaper at night, is launching himself on his reading career. He, in truth, is finding joy and power in the pages of a book, a psychological posture that every successful reader continuously brings to each reading encounter, knowing, subconsciously if not consciously, that he can make a go of print. This is the first and foremost reading skill.*
>
> Martin, 1984

Reading

Reading is the only way to become a good reader and to develop an adequate vocabulary and good writing style. Intensive practice in reading is vital and needs to take place in and out of school. Many students have phobias about reading and must learn to approach the task and profit from it, and they must have massive practice in gathering meaning from text if they are to make rapid progress in developing literacy.

- The more students read, whatever their current level of performance—juxtaposing their own experiences with those they encounter in fiction selections and gathering new information from expository prose—the broader their language base and cultural understanding. If they can become fluent readers even at a third grade level, there is much they can teach themselves.

- Wide reading is a major avenue of vocabulary acquisition. In fact, beginning around grade three, "the major determinant of vocabulary growth is the amount of free reading" (Nagy & Anderson, 1984, p. 327). The relationship between wide reading and quality of writing is also true for English language learners (Janopoulos, 1986; Krashen, 1993).

- People who read widely and rapidly generally score higher on standard measures of achievement (Anderson, Wilson, Fielding, 1988; Foertsch, 1992). They have more ideas to bring to the task; their reading rate is faster; and their writing is of higher quality.

Reading Nonfiction: Many informational tradebooks are available at a wide range of reading levels. The content of these books may be science or health, social studies, technology, cultural events, or daily life experiences. They are often written better than the textbooks students are using, and the organizational devices used by their authors to convey information are the same ones used in well-written texts for literate adults.

Reading Fiction: There is a rich children's literature collection available. Students may at first be able to read only books at the picture storybook level, but they can learn from reading them, even learn to write their own stories around them. And the literary devices used in these books will include many used in longer, more advanced literary selections.

Reading Strategies

The Read-aloud

A Read-aloud is simply reading aloud to your students. Read-alouds of informative, expository prose can be very brief, sharing as little as a sentence and illustration, or a single paragraph. When you are looking for good models to share and discuss with your students, a) look for passages that address concepts that fit into curriculum content across disciplines; and b) passages that are well-written, especially in terms of how the author(s) announced and supported his/her major points.

- Encourages reading, models fluent reading, and is a way to share reader responses (Morrow & Weinstein, 1986; Pitts, 1986)
- Provides students experience with the rhythms of the English language
- Models enjoyment and/or learning from print
- Seeks to engage students with text
- Beneficial for low achievers (Bridge 1989; Winograd & Bridge, 1995)
- Works to increase students' comprehension and vocabulary test scores (Cochran-Smith, 1988)
- Read-alouds by teachers serve as a form of "recommendation" of a book or selection which frequently leads to increased reading (Greaney & Hegarty, 1987; Wendelin & Zinck, 1983)

The Talk-aloud

Talk-alouds provide an opportunity to model the reading/writing connection, so students can "see" and hear how an experienced and skillful reader uses what the author has provided. The text used may be only an illustration, a sentence, or several pages. They are often in the context of mentioning something we noticed and appreciated about the text. Comments may include discussing what you noticed about the relationship between the cover, the title, and the first line, and how they all worked together to announce the primary message of the book. Or, you might address what you noticed about how the author organized the text to get across the message. It is during talk-alouds that we can address anything that relates to the communication loop between the author and the reader (the reader-writer connection). Students participate in these discussions from the beginning. Eventually, after several teacher demonstrations, students may engage in similar "talk-alouds" with their reading partners and occasionally "lead" small and large group sessions.

- Encourages a connection between the author and the students (the reader-writer connection)
- Models how skillful readers "use" the text and illustrations
- Provides opportunity for literary discussions between teachers and students and between students

The Think-aloud

Think-alouds provide an opportunity to share with students your use of comprehension processes or strategies as you gather meaning from and use written text. This may include how you determine main idea or the author's purpose, use the author's organization of text, access and use prior knowledge, and how reading often creates new questions for us to answer. Essentially, you are modeling for students how you gather meaning from text, explicitly telling/modeling for students the strategy or comprehension process you are using to understand the author's message. This also includes how you think or approach the task of gathering meaning using that strategy. After several teacher demonstrations, students begin to practice. These student think-alouds provide opportunities for teachers to assess students' reading comprehension.

- Models the complex task of comprehending text
- Helps students think more metacognitively about their reading to promote reading improvement
- Makes the strategies used for processing text visible and accessible to students
- Allows teachers to assess students' reading comprehension skills

Explicit Instruction

Explicit instruction provides modeling and systematic instruction for students in how comprehension occurs. As defined here, it is a "training model" for skill development. Basically, it is a cycle of teacher explanations of a process, followed by a teacher think-aloud using that process, followed by students practicing think-alouds using that process with different text, followed by another teacher think-aloud designed from observing and listening to students. To reiterate, through explicit instruction, students are "trained" to recognize and use language concepts and comprehension processes through a series of lessons that include teacher explanations, teacher modeling with think-alouds, student practice of think-alouds, and multiple student applications of the concepts/processes during day-to-day reading.

- Helps students develop a foundation of comprehension strategies for reading
- Helps students think more metacognitively about their reading to promote reading improvement
- Allows for in-depth focus on reading comprehension processes and strategies

Practices that Facilitate Learning to Read

1. Bring opportunities for reading, writing, talking, and listening together so that each may feed off and into one another.
2. Talk about and share different kinds of reading.
3. Focus on using reading as a tool for learning.
4. Make reading functional and purposeful.
5. Develop positive self-perceptions and expectations concerning reading.
6. Use a broad spectrum of sources and a variety of real books for student learning materials.
7. Provide multiple and repeated demonstrations of how reading is done or used.
8. Use silent reading whenever possible and whenever appropriate to the purpose.

Flippo, 1997

Picture Word Inductive Model (PWIM)

The picture word inductive model is an inquiry-oriented language arts strategy that employs photographs containing familiar objects, actions, and scenes to elicit words in children's listening and speaking vocabulary. This model helps students add words to their sight reading vocabulary, as well as their writing vocabulary, and also discover phonetic and structural principles present in those words. It includes both explicit instruction and concept formation lessons and is a multidimensional approach to literacy development, one which encourages the use and integration of a variety of actions and strategies. PWIM requires continuous modeling of reading and writing by the teacher and can also be used to teach students how to use observation and analysis in their study of reading and writing, as well as in comprehending and composing (Calhoun, 1999).

- Can be used with classes of students with mixed abilities and cultural backgrounds
- Builds vocabulary directly
- Motivating; promotes a feeling of immediate success among learners
- Uses students own developed language (listening and speaking vocabularies) to add reading and writing to their communication repertoire
- Supports transition from spoken to written language; students can see the transformations from oral to written expression
- Builds concepts about how language works, from use of conventions and standard English, to more complex concepts such as paragraph organization

Development of Reading

Stage	Description
Early Emergent (preschool)	✧ Knows that reading is something that people do ✧ Knows that books contain stories ✧ First labels and comments on pictures ✧ Later, tells a story in oral like language ✧ Finally, includes "book language" to tell the story
Later Emergent (early primary)	✧ Knows that print contains the message ✧ Tries to read the print using pictures to predict the text ✧ Roleplays as a reader relying on familiar text ✧ Reads own name and familiar environmental print
Early Literacy (later primary)	✧ Makes use of context for predictions ✧ Has a basic sight reading vocabulary of functional words ✧ Knows the relationship between most sounds and letters ✧ Reads slowly, repeating words and phrases
Fluent (later primary and/or in the year following)	✧ Sets own purpose for reading (interest, information, favorite authors) ✧ Uses predicting, sampling, and confirming ✧ Self corrects miscues independently ✧ Rate of reading increases ✧ Prefers to read silently
Expanding (later elementary and secondary years)	✧ Hooked on books ✧ Understands voice and style ✧ Is aware of a variety of genres ✧ Can identify literary elements ✧ Relates literature to personal experiences ✧ Uses reading for a variety of purposes ✧ Comprehends at different levels (literal, inferential, critical)

Writing

Characteristics of Children's Writing

Children's writing takes on predictable characteristics as they move from non-conventional to conventional forms. This developmental ladder is first described in "Characteristics of Children's Writing", then illustrated in the "Stages of Writing" chart.

1. *Differentiation of scribbling between drawing and writing*
   Writing scribbles take the form of cursive writing in our culture (as opposed to the shape of scribble in, for example, Arabic). This differentiation indicates that children are acquiring a "gestalt" or overall impression of the form of written language, with a focus on the sense of the whole rather than the particulars. It is analogous to the speech intonation patterns of toddlers, sounding like language but not made up of words. The beginnings of written language are much earlier than making letters, in the same way that oral language begins before baby's first words.

2. *Development of linearity, symmetry, and directionality*
   Writing-like behaviors ("pretend writing") such as left-right directionality help us to see that a child is acquiring procedural knowledge related to writing and reading.

3. *Development of letter-like shapes, then letters*
   This development demonstrates the influence of environmental print. In particular, young children form capital or capital-like letters. Once again, gross features or approximations develop before the form becomes stable. At this time, children do not associate the letters with particular sounds, often writing to make written objects without intending to represent a particular message. A child may ask, "What does this say?"

4. *Making "words"*
   Children use a general rule strategy to "make words," using approximately three-six letters and avoiding too much repetition of a particular letter. Often children use the letters of their own name in various combinations.

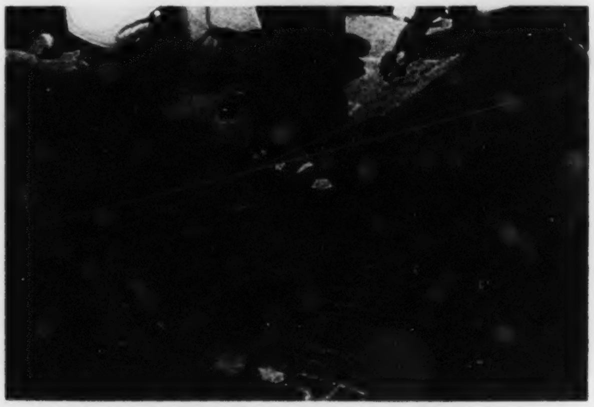
5. *The syllabic hypothesis*
   This is a specific example of one-to-one correspondence. Children use one letter to represent one syllable, often a whole word. Initially, the syllabic hypothesis is used to justify production, later to regulate it, and finally to plan ahead. Children first represent concrete nouns. The last words to be represented in a message are articles and other function words.

6. *Functional spelling*
   Functional spelling indicates a child understands that writing can be "talk written down." An understanding of the relationships between letters and sounds is developing. Initially, one letter may represent a whole word (for example, "B" for birthday), but soon the child realizes speech

can be segmented. Children frequently use a letter-name strategy to create spelling. A typical sequence begins with consonants only followed by inclusion of long vowels. Other vowel sounds, short vowels for example, are the last to become conventionalized. Many children use short vowels in non-conventional ways because they associate the vowel sound with the vowel name that feels closest in the mouth (for example, short "e" with "a"). Research indicates that encouraging functional spellings frees children to write more substantively in the primary years.

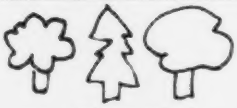
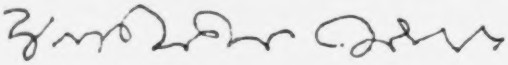
7. *Segmentation*
   Children use a variety of techniques to segment words. The most common of these is the use of the dot or the dash. These marks give us insight into children's developing sense of word boundaries. As children learn to read, they come to realize that our writing system utilizes spaces to separate written words.

8. *Punctuation*
   Although the period is the most frequent punctuation mark, it is often not mastered first. Many children use exclamation marks, quotation marks, commas, and apostrophes in their early writing. Many over-generalizations occur, for example, using periods at the ends of lines rather than to end sentences. This is often the result of reading material to which children are exposed; for example, some basal readers or teacher-made charts that place one sentence per line rather than using continuous text.



Stages of Writing

Name ____________________
Date ____________________

1.  (I like trees.)	Pictures
2  (I like trees.)	Approximation
3. BndnVWo (I like trees.)	Random letters
4. I to h (I like to color.)	Random and initial sounds
5. I h a p c (I have a pretty cat.)	Initial consonants
6. I pa enmi ft yrt. (I play in my front yard.)	Initial and final sounds
7. I got a skat Berd fer Krismes. (I got a skateboard for Christmas.)	Vowel sounds appear
8. My favrrit food is appls and makrone. (My favorite food is apples and macaroni.)	All syllables represented
9. Wen I was on vacshon it was fun to play weth Nicole. She is my baby sister. She is one year old. She is a verry nice sister becss it chers you up weth a baby sister around.	Multiple related sentences and many words with correct spelling

Development of Writing

Stage	**Description**
Early Emergent (preschool)	✧ Knows writing is something that people do ✧ Writes in scribbles, letter-like shapes, and imitative cursive ✧ Begins to relate letters to spoken segments but NOT to letter sounds (phonemes) ✧ May or may not intend a message when writing
Later Emergent (early primary)	✧ Writing reveals children's insights about how language works ✧ Experiments with the functions of written language (making lists, writing checks, preparing menus) ✧ Discover the relationship between letters of the alphabet and spoken sounds ✧ Uses inventive spelling ✧ May ask an adult to write down their message ✧ Traces, rewrites, or writes independently using inventive spellings ✧ Discovers that writer's intentions are expressed through specifically arranged symbols
Early Literacy (later primary)	✧ Transitions from auditory to visual spelling strategies ✧ Inventive spellings are slowly replaced by conventional spellings ✧ Writes about topics of personal interest ✧ Writes letters, stories with characters, research reports, notes, labels, and poems ✧ Composes sentences that make sense ✧ Develops a sense of beginning, middle, and end ✧ Can arrange ideas in a logical sequence ✧ Can read their own writing
Fluent (later primary and/or in the years following)	✧ Consistently writes pieces that are a full page or more ✧ Uses more of the conventions of adult writing ✧ Ideas flow freely; language is not restricted or stilted ✧ Writing is used to think, to create, and to communicate ✧ Can use resources to assist or check spelling
Expanding (later elementary and secondary years)	✧ Writes with personal voice and style for a variety of purposes, in a variety of genres

Spelling

Development of Spelling

Spelling instruction should be an important component of language and literacy reading and writing. Since spelling involves writing, and writing involves thinking, the process of inventive spelling serves both the writer and the thinker. "Even though the teacher's goal is to foster more conventionalized forms of spelling, it is important to recognize that there is more to writing than just spelling and grammatically correct sentences. It is true that children will need adult help to master the complexities of the writing process. But they also will need to learn that the power of writing is expressing one's own ideas in ways that can be understood by others" (NAEYC, 1998).

Spelling Principles

A developmental view of spelling focuses on taking risks, teaching and applying spelling strategies, and recognizing and correcting misspellings when students edit or proofread their written work. This view recognizes first and foremost that spelling is learned and taught in the context of writing and that spelling competence, like all language competence, develops gradually over time.

Routman, 1991

Children's stages of spelling development tend to correspond closely with their stage of literacy development.

Spelling is not separate from reading and writing, but is an integral part of both. It is a developmental process where skills evolve in stages similar to learning to speak. Like all skills, it is acquired through teaching and meaningful practice. Spelling is functional. It serves a purpose for both the reader and the writer in making meaning. Spelling is social and, like all language, is related to the values and power relations in society. It is also contextual in that uses of spelling vary in different contexts (Bean & Bouffler, 1997).

Strategies Learners Use for Spelling

- *Spelling as it sounds*. This is generally referred to as invented spelling and refers to direct sound/symbol relationship. (Nashon for nation)
- *Spelling as it articulates*. This makes use of the articulation aspects of sound. (Chridagen for tried again)
- *Spelling as it means*. Semantic units are represented. (Thanku for thank you)
- *Spelling as it looks*. This is a visual strategy that uses graphic patterning. (Shcool for school)
- *Spelling by analogy*. This is using words you know to spell words you don't know. (Realistick for realistic)
- *Spelling by reference to an authority*. Use a dictionary or consult someone.
- *Spelling as an alternative*. Use another word that is known but means the same.

(Bean & Bouffler, 1997)

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Strategies for Teaching Spelling

- Teach spelling as a developmental process.
- Encourage young children to invent spellings.
- Encourage children to become word hunters and become more personally responsible.
- Take time to teach spelling.
- Use word lists to organize and focus learning.
- Conduct a spelling workshop, 75 minutes per week, and teach strategies for learning words.
- Allow children to be actively involved in their own learning.
- Use mini-lessons to inspect the patterns and consistency of English spelling.
- Teach children to proofread.
- Make spelling consciousness the goal.

Gentry, 1993

Linking Conditions for Learning to Spelling

CONDITION	CLASSROOM STRATEGIES
Immersion	Print rich classroom, shared reading, read aloud, modeled reading and writing, word or letter centers, games, activities
Demonstration	Read aloud, modeled reading and writing, cooperative reading and writing, teach onset and rime, blends, digraphs, think aloud by the teacher focusing on strategies for spelling
Engagement	Show the power and value of conventional spelling. Discuss all aspects of spelling and the play of words.
Expectation	Use flexible and mixed ability grouping. Demonstrate the time and place for standard spelling. Make explicit the strategies good spellers use.
Responsibility	Insist on justification of comments when possible. Use language of speculation asking what else could be done.
Approximation	Discuss spelling approximations as temporary spellings and study similarities/differences to conventional spelling.
Response	Observe the child's temporary spellings to help modify to conventional spelling.
Employment/Use	Use word games, do proofreading.

Good spellers tend to:

- View spelling as a problem-solving task, thus being prepared to attempt unknown words by making use of prior knowledge to predict the most likely spelling.
- Have a well-developed language competence through exposure.
- Have an interest in words.
- Have a "spelling conscience" and consequently be prepared to proofread their writing.
- Have a large number of remembered spellings and can therefore write a large number of words as whole units.
- Have a learning method or systematic procedure for learning new or difficult words.
- Be confident about their ability to spell.
- Be able to make generalizations and deductions readily.
- Articulate words clearly.
- Write swiftly and legibly.

Good spellers tend to use the following strategies:

- The knowledge of the morphology, (aspects of language structure related to prefixes, root words, etc.,) and the consequent relationships between words.
- The knowledge of graphophonic relationships, (the variety of sound/symbol relationships), and the probability of letter sequences, the likely position of letters in a word and possible letter patterns.
- The ability to use visual memory to determine whether a word looks correct.
- The ability to apply a large number of generalizations.
- The ability to develop and use mnemonics, or memory aids.
- The ability to use resources such as other people, word lists, and dictionaries for a variety of purposes.

(adapted from Bolton, F. & Snowball, D. 1993)

Spelling Principles

A developmental view of spelling focuses on taking risks, teaching and applying spelling strategies, and recognizing and correcting misspellings when students edit or proofread their written work. This view recognizes first and foremost that spelling is learned and taught in the context of writing and that spelling competence, like all language competence, develops gradually over time (Routman, 1991).

The following principles apply:

- Spelling should facilitate communication of written language.
- Spelling is developmental.
- The need for standard spelling should be kept in proper perspective.
- There should be no special spelling curriculum or regular lesson sequences.

Quoted from Kenneth Goodman, Brooks Smith, Robert Meredity, and Yetta Goodman (1987). *Language and Thinking in School: A Whole-Language Curriculum*, pp. 300–301.

Reading and Spelling High-Frequency Words

Teaching High-Frequency Words

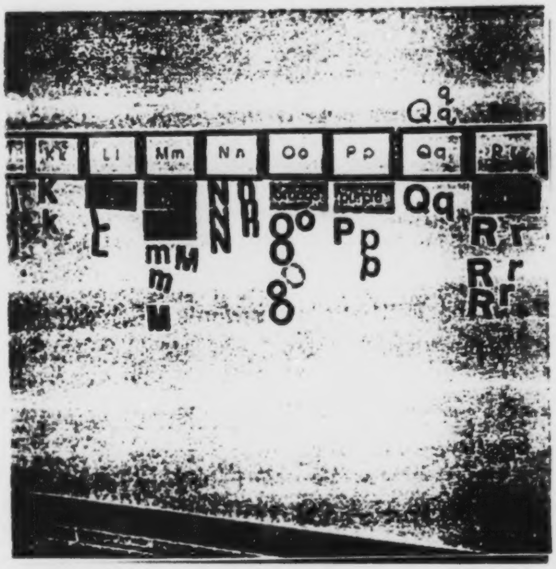
Most high-frequency words are abstract and not easily connected to meaning. Cunningham (1995) says there are three principles for teaching these words.

1. Provide a way for children to associate meaning with words.
2. Once meaning is associated, provide practice using a variety of learning modes.
3. If a common word has many confusable word usages, teach one first. As soon as that one is learned, teach another and practice both. Then teach a third and practice all three (Cunningham, 2000).

Strategies for Teaching High-Frequency Words

Word Walls

- Select four or five words to introduce each week
- Select an activity each day to do with the words
  - Discuss letter and sounds
  - Snap or clap the word
  - Write the word
  - Draw configuration boxes around the word
  - Give clues about a word and have students guess the word
  - Play Wordo
  - Do a cross checking activity
  - Make sentences
  - Do a variety of games like rhyming endings.
- Display prominently in the room for all children to see easily
- Review all the words weekly
- Words will vary from classroom to classroom



Word Sorts

- Can be done with any group of words
- Purpose is to focus on various features of the words
- Used to help children analyze words and look for patterns
- Process
  - Write 10-15 words on large index cards
  - Have children write them on individual papers
  - Have the children sort the words in different piles depending on features: number of letters, beginning letters, rime, endings, or semantics
- Teacher can direct the sort

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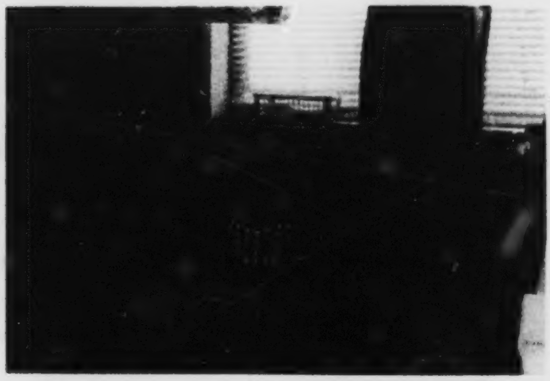
Making Words

- Children are given letters and they use them to make words
- Children go from making small words to making larger words
- Activity is active
- Children look for patterns in words and how changing one or more letters change the word
  - – Teacher gives directions
  - – Children can reinforce the activity at a center
- Rimes—the following are all rimes. (Rime—the portion of a syllable that follows the onset.)

  500 words can be derived from 37 rimes. (onset–fl + rime–ack = flack)

  -ack -ain -ake -ale -all -ame -an -ank
  -ap -ash -at -ate -aw -ay -eat -ell
  -est -ice -ick -ide -ight -ill -in -ine
  -ing -ink -ip -ir -ock -oke -op -or
  -ore -uck -ug -um- -unk

(adapted from Cunningham, 2000)



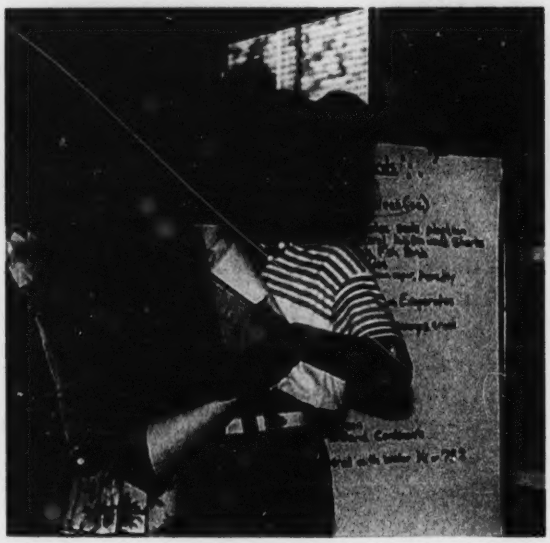
Stages of Spelling Development (adapted from Bear, et al., 2000)

Age	**Characteristics**
1–7 Preliterate	✧ Marks on page ✧ Symbols or known letters randomly used in pretend writing
5–9 Early Letter Name	✧ Syllabic spelling ✧ Uses several alphabetic letters ✧ Mostly uses letter names to spell
Middle Letter Name	✧ Has left to right ✧ Uses most letters ✧ Knows some clear letter sound correspondences ✧ Uses vowels in most words
Late Letter Name	✧ Uses most beginning and ending consonants ✧ Uses short vowels ✧ Knows most clear letter sound correspondences ✧ Knows some blends and digraphs ✧ Uses only sound patterns
6–12 Within Word Pattern	✧ Starts to use both visual and sound patterns ✧ Getting r-controlled vowels in on syllable words ✧ Begins using long vowel patterns ✧ Gets common long vowels in one syllable words ✧ Gets most long vowels in one syllable words ✧ May know some inflectional endings and common suffixes
10+ Syllable Juncture	✧ Short and long vowels stable in one syllable words ✧ Experiments with joining syllables-doubling letters, changing /y/ to /i/ ✧ Beginning to understand the connection between meaning and spelling e.g. /ed/ conveys past tense ✧ Learns homophones and homonyms
Derivational Constancy	✧ Uses common affixes and root words and concept of derivations ✧ Begins to explore meaning basis and links to spelling ✧ Can spell many multi-syllable words ✧ Learns low frequency vowel patterns, mainly from meaning ✧ Explores when to use different spellings for the same ending, e.g. /tion/ and /sion/

Development of Viewing and Visual Representation

Listening, speaking, reading, and writing are not the only modes of communication. Communication can also occur non-verbally, for example, American Sign Language, universal signs, logos, icons, and Braille. For some children these non-verbal forms of language are a major way of communicating. Even when we speak, meaning is conveyed not only through words but also through non linguistic cues such as tone of voice, pitch gesture, facial expression, posture, body language, and eye contact. Likewise, when we listen we interpret not only what is said but also these non-linguistic cues.

Reading and writing also incorporate non-verbal information, for example, directionality, spacing between words, and punctuation marks. Maps, charts, and graphs are specialized visual forms that communicate information. Viewing and visual representation are critical skills when using all of the forms of information made possible by technology.



Children need opportunities both to express and respond to visual representation across content areas, for example:

- Dramatic play, role play, pantomime, creative movement, dance
- Clusters, webs, maps, charts, graphs
- Drawings, collage painting
- Modeling, building, constructing
- Film, television, video
- Spreadsheets, databases, computer graphics
- Scientific inquiry

Children learn to read most effectively when all of the cueing systems work together rather than when treated separately. Phonics, spelling, printing, and other necessary skills of written language are learned more effectively through meaningful and purposeful use rather than in isolation.

Considerations for Children with Special Needs, High Ability, and First Languages other than English

All children deserve to reach their full language potential. Depending on the individual needs and development of the student, the nature and degree of adaptation will vary. Students need to be able to build on their unique intellectual, academic, social, physical, and cultural backgrounds. With the previous "Common Understandings" in mind the following considerations should also be taken into account.

Considerations for Children with Special Needs (Lincoln Public Schools, 1998)

1. Due to both biological and background factors, the degree of ease and difficulty of learning to read and write varies significantly among children. However, a major contribution to the prevention of reading/writing failure is instruction that appropriately meets the needs of the child (Adams, 1997). Instructional elements are a source of our most powerful tools to build reading success for all students.
2. No one approach or strategy can meet the needs of every child. Rather, strategic application of a variety of instructional strategies linked to assessed student needs will increase the likelihood that student needs are met. The host of strategies have set a course for a multifaceted instructional system to develop literacy in young children.
3. Some strategies have been found to be more effective in preventing and correcting reading difficulties in learners with special needs. According to Adams (1997), and Gaskins & Gaskins (1997) those include the following:
    - Determine the student's appropriate instructional level.
    - Teach to the most critical, relevant goal for the student.
    - Provide explicit, systematic instruction balanced with some opportunity for implicit learning that has been guided by on-going assessment.
    - Give early support of phonological awareness and letter knowledge.
    - Use specific instruction on letter-sound correspondences and spelling conventions.
    - Model and guide application of spelling-sound knowledge in reading and writing opportunities.
    - Provide daily sessions in guided reading at the student's instructional level which teach to both fluency and comprehension.
    - Provide daily sessions in independent reading at the student's mastery level.
    - Practice contextual reading and reading comprehension skills.
    - Use teacher-activated exploration of new language, concepts, and thinking processes that support the interactions between oral and written language.
    - Create a safe environment for risk taking, understanding of similarities, and acceptance and appreciation of differences.
    - Organize for maximum academic engagement of all learners.
    - Teach and integrate strategies across the curriculum.
    - Encourage extensive reading and sharing of reading.
4. Early "learning-to-read" programs should be designed to ensure that appropriate amounts of instruction time be allotted for the development of phonological awareness, phonics, spelling,

reading fluency, automatic word recognition, and comprehension strategies. All of these strategies are necessary but in and of themselves are not sufficient. However, for students experiencing challenges in learning to read, it is essential that these aspects of instruction be taught in an integrated context (Lyon, 1997).

5. To the fullest extent possible, collaborative planning and teaching among general and special educators should guide instruction for students with special needs. Coordination of services will promote the development of appropriate, cohesive, and strategic instruction to meet the students' needs. This integration and cohesion will increase consistency and generalization of students' skills and strategies.
6. Grouping of students with special needs should be fluid to address the multidimensional aspects of their learning characteristics. Students with special needs benefit academically and socially from being with their peers, both with and without disabilities.
7. High expectations for student achievement should be set for all learners. Expect and document progress.

Considerations for High Ability Learners (Lincoln Public Schools, 1998)

Although the following suggestions will be helpful when planning for all students, high ability learners will benefit greatly from instruction which is based on these recommendations. Appropriately designed differentiated curriculum should:

1. Be planned and sequentially organized to include specific expectations for the acquisition of subject matter, mastery of skills, creation of products, and development of attitudes and appreciations related to self, others, and the environment.
2. Place emphasis on the interdependence of subject matter, skills, products, and self-understanding within the same curricular structure.
3. Include provisions to meet the need for some type of instructional pacing.
4. Allow for the expression of some aspect of the individual's interest, needs, abilities, and learning preferences.
5. Be organized to allow for some individualization and self-selection.
6. Provide opportunities to learn to reconceptualize existing knowledge, to perceive things from various points of view, and to use information for new purposes or in new ways.
7. Provide learning experiences for students to address the unresolved issues and problems of society and apply personal and social data to analyze, clarify, and respond to such issues and problems.

Considerations for Children with First Languages Other than English (Lincoln Public Schools, 1998)

1. Provide a classroom environment that allows meaningful oral language interaction with teachers and English-speaking peers; use concrete materials and experiences to make the oral input comprehensible.
2. Provide a meaningful written language environment that demonstrates the functional uses of print and links children's homes and community print environments to the school's print environment.
3. Provide a model of reading for meaning rather than decoding. Use culturally familiar material and integrate new vocabulary and concepts into students' existing knowledge by using pre-reading and post-reading discussions and open-ended questions.
4. Provide a literacy program that incorporates interactive story telling, shared reading and taped books, the language experience approach, the use of writing through dialogue journals, and thematic units for integrated literacy instruction.
5. Provide instruction in how to comprehend content materials and to acquire study and test taking skills.
6. Provide native literacy instruction where feasible, recognizing the common language proficiency underlying reading and writing in both native and second language.
7. Provide children who do not read in their native language with additional opportunities to understand the links between oral and written language, the functions of literacy, and the concept of print.
8. Adjust instruction to the language proficiency level of the children. Walling (1993) suggests that the use of "sheltered" English techniques is one way to address the different learning styles and language proficiencies that children bring to the classroom. The following are a few suggestions for using "sheltered" English techniques to address different learning styles and help children comprehend:
    - Speak clearly and naturally but at a slightly slower pace.
    - Simplify vocabulary without "talking down" to students.
    - Give directions in a variety of ways.
    - Use examples or point out observable models.
    - Give special attention to key words that convey meaning; point them out or write them on the board.
    - Avoid jargon or idioms that might be misunderstood if taken literally.
    - Read written directions out loud and write oral directions on the board.
    - Allow time for translation by an aide or classmate and allow time of discussion to clarify meaning.
    - Divide complex or extended language discourse into smaller, more manageable units.
    - Allow extra time. New learners of English are coping with translating back and forth between languages as well as dealing with new content.

9. Help children process new vocabulary and cognitively demanding concepts. According to Hamayan and Perlman (1990) one of the difficulties children encounter in the mainstream classroom is in processing cognitively demanding concepts in English. They suggest using hands-on demonstration as often as possible to make this task easier. By demonstrating new concepts, meaning is conveyed not through language alone, but with the help of concrete referents that the students can touch, hear, and see (and sometimes taste and smell). In hands-on demonstrations, meaning is also invariably conveyed through gestures and body language, making it easier for children to comprehend the concepts being presented.

   Additionally, Hamayan and Perman (1990) suggest that classroom teachers can help children process new vocabulary by contextualizing lessons for them. Extensive introductions to lessons help clarify the context in which new concepts are to be presented. Classroom teachers need to familiarize the children with the general areas under consideration (Mohan, 1998) and give them a set of ideas or plans with which to make sense out of new information. The following strategies will help teachers contextualize lessons:
   - Draw from the children's personal experience in the topical area or one closely related to it.
   - Have children, either in small groups or in pairs, list everything they know about the topic to be presented.
   - Guide the children in categorizing the different pieces of information they have listed. For example, a web helps organize the information that students already have about a topic to prepare to learn more about it.
   - Help students read a chapter in a content-area textbook more easily, highlight the main idea and supporting details of the chapter. If the summary sentences are buried in the text or linguistically too complex for children, sentences can be pulled out and written in simple English on a separate sheet of paper and given to children for reference.

10. Encourage parental interest and participation in their children's education.

    Parental involvement is an integral part of the successful program. Involving parents of children is important not only for their academic success, but also for supporting the family objective of effective functioning in the larger society (Walling, 1993).

11. Recognize the importance of the child's education.

    When the child's native language is placed in high esteem, the child's own self-esteem is bound to improve. Parents are also more likely to become involved in their children's education if the use of the native language is valued, especially by the teaching staff, and furthermore, parents are then more likely to take a collaborative role with the school (Hamayan, 1990).

    Cognitive and academic development in the first language has been found to have critically important and positive effects on second language learning (Bialystock, 1991; Collier, 1989, 1992; Garcia, 1994, Genesee, 1987, 1994). Academic skills, literacy development concept formation, subject knowledge, and strategy development learned in the first language will transfer to the second language. However, because literacy is socially situated, it is equally critical to provide a socio-culturally-supportive school environment that allows the first language and academic and cognitive development to flourish. Self-esteem and self-confidence are also critical components of success.

Hamayan and Perlman (1990) suggest it is the responsibility of the teachers of children to see to it that language and cultural diversity are seen as tremendous sources of richness from which all students can benefit. Language minority children's contributions could be numerous; they can teach others their language; they can teach others about their cultural heritage traditions. Language minority students can serve as native-language tutors to peers and younger students who need native-language support. They also can serve as links to parents who are not proficient in English. Hamayan and Perlman (1990) conclude that by showcasing children's strengths and contributions in the classroom and throughout the school, we will be ensuring a high likelihood of language minority children becoming proficient in English and succeeding in school and at the same time providing all children with a richer and more vibrant education.

Most effective instructional practices suggested for native-English speaking students have also been shown to be effective. Many researchers have found that instructional processes in reading are similar for both native and second-language learners (Allen, 1989; Goodman, 1986; Hudelson, 1989; Urzua, 1989). However, teachers may need to employ a broader variety of instructional procedures than would be necessary with native-English speakers.

According to Spangeberg-Urbschat, & Pritchard (1994) specific differences between reading instruction for native-English speakers and for second language learners include:

- While the reading process may be similar in both groups, greater cognitive demands are made on children who must develop reading skills simultaneously with oral language skills.
- No assumptions can be made about homogeneous background of children
- Not only may children be a different age and language background, but they may have completely different educational backgrounds as well.
- No single instructional approach is likely to meet all the needs of such a diverse groups of students. Instructional approaches need to be adapted to meet student's varied instructional needs.
- In the case of second language children, elaboration on or activation of prior knowledge about a topic involves identification and understanding of children's cultural background and experiences.
- With older children, teachers should capitalize on their level of cognitive maturity rather than using teaching procedures designed for primary grade children. For example, older students should be more capable of developing metacognitive awareness of reading tasks than younger children.
- Learning-strategy instruction is especially important. Learning strategies can provide opportunities to read and write supported by thoughtful and exemplary questioning, time for reflection, encouragement, and helpful assessment.

Learning Through the Language Arts

Meaning is central to language. Writing and reading, the process of constructing meaning with written symbols, involve the coordination and integration of complex cueing systems. Children will work to pull thoughts and words together as they listen, speak, read, and write in an attempt to make sense of their perceptions, thoughts, and feelings. All of these language activities, whether for composition or comprehension, are thinking activities and can be understood as developmental processes. For example, both composition and comprehension require that the student move from the known to unknown, supported by a bridge of words. Both require the child to translate thought to words and words to thought.

- Fluent, clear writing expressed with a sensitivity for language and based in good thought can be corrected if it contains errors of usage, punctuation, spelling, or grammar. The focus for young children is on making connections between thought and print.
- Reading is essentially a dynamic thinking activity in which the reader interacts with the text to create a meaningful understanding of the writing. Good readers seek to identify meaning rather than isolated words. In the primary classroom, skills are learned in context and for a purpose.
- Teachers need to be concerned with both skills and processes; there is not real dichotomy. Skills are essential for developing language competence, but they are not ends in themselves. Processes are crucial, but serve only to accomplish a purpose. It is important that skills be kept in the perspective of larger strategies with which the child makes meaning of print.

ride
swim
outside
ball

- Children must be taught to monitor their own processes. As they are reading, they may recognize they are not understanding and should apply a strategy to gain comprehension. They also can monitor their own writing processes, avoiding proofreading as they draft their thoughts.
- These processes integrate many skills and strategies. Children experience success through opportunities to read and write supported by thoughtful and exemplary questioning, time for reflection, encouragement, and helpful assessment.

The Goal of the Language Arts Program is the Understanding of Reading and Writing

Some children learn what reading and writing are from the way they are taught; it is important that instruction stress comprehension and meaning right from the beginning. Young children focus on meaning as they make sense of their world. This "sense" must be used to help children master the conventions of print. Children's knowledge of semantic and syntactic information can reduce the need to attend to every piece of graphic information on the page.

In order to teach for understanding, the language arts teacher must be informed about the most promising teaching practices in the areas of:

- Reading/writing connections
- Reading comprehension
- Cueing systems
- Grouping for learning
- Reading to children
- Oral reading
- Independent reading
- Viewing and visual representation

Reading and Writing Connections

Reading influences writing and writing influences reading. For example:

- The type and amount of reading material to which writers are exposed influences the choice of topic, genre, vocabulary, style, and attitude. It is critical that children, at all levels, be exposed to informational text and learn how authors organize it for meaning.
- Children who are taught to read from basal readers with stilted language and format produce writing that is also stilted in language and format.
- Children who write know text makes sense and look for meaning in reading.
- Writing has been found to contribute to the knowledge base of how oral and written language are related to growth in spelling, phonics, vocabulary development, and reading comprehension.
- High levels of reading comprehension are attained when reading is approached with some of the strategies that writers use, for example, activating prior knowledge, formulating ideas, reflecting, and revision.
- Writers use reading in an integrated fashion, reading their own writing, reading a variety of other materials, and using knowledge they have acquired through previous reading.

Given that reading and writing develop together, these principles should be followed:

- Children learn to read by writing and to write by reading. Writing experiences begin along with reading experiences.
- Writing strategies should be incorporated throughout the reading process, from pre-reading to reflection upon the reading.
- Well-written materials should be selected for reading instruction
- Children should read their writing to others.

- Writing and reading comprehension both improve with instruction on story structure.
- Reading and writing should be linked with talking. Purposeful, child initiated talk is essential to reading and writing development.

Reading Comprehension

Comprehension is a dynamic, interactive process of constructing meaning by combining the reader's prior knowledge with the information in the text and within the context of the reading situation.

Prior knowledge is the major determinant of reading comprehension. When we read, we bring meaning to the print in order to get meaning from it. Readers need knowledge of the content, structure of the text, and effective strategies for reading.

Readers

Good readers use two kinds of strategies: 1)activating prior knowledge, and 2)self-monitoring for comprehension.

Research indicates the strategic reader:

- Understands that different purposes and different texts require particular strategies
- Identifies the task and sets of purposes
- Chooses appropriate strategies, for example, predicting, rereading, summarizing, looking for relationships
- Monitors comprehension, including:
  - Knowing whether one is comprehending
  - Knowing what is being comprehended
  - Knowing how to self-monitor comprehension whenever meaning is blocked

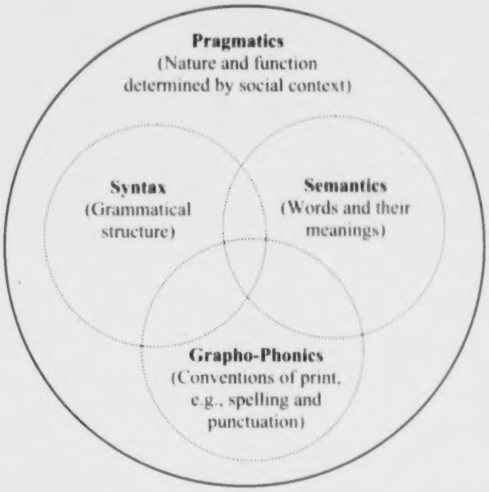
Teachers

Some of the research implications for the teacher include:

- Choosing well-written material that is clear and has effective structure
- Using strategies that activate prior knowledge such as clustering and webbing
- Teaching about the structures of written material, including how informational text is organized for meaning
- Accepting a wide range of responses in comprehension
- Engaging in reading for a purpose which makes sense to children.
- Modeling strategies
- Providing explicit instruction

Cueing Systems for Reading and Writing

Reading and writing involve the coordination and integration of four cueing systems; pragmatics, semantics, syntax and grapho-phonics. The diagram below illustrates the dimension of written language.


Pragmatics
(Nature and function determined by social context)
Syntax
(Grammatical structure)
Semantics
(Words and their meanings)
Grapho-Phonics
(Conventions of print, e.g., spelling and punctuation)

Writing is a process of composing with writing symbols. The following sections elaborate how writers and readers integrate the cueing systems to construct meaning as they write and read.

The Process of Writing

Pragmatics-The Context of Language

Young children usually write the way they talk. They do not yet understand writing is not simply talk written down. In the early stages of writing, it is important to build on the child's knowledge of oral language and to bring the child's oral language to the printed form, for example, through language experience activities and expressive writing. However, in order to build children's pragmatic knowledge of written language, it is important to bring print to the child.

The teacher may:

- Immerse the child in functional written language and provide opportunities to use writing informally in the course of daily activities such as the calendar, sharing time, signs, labels, invitations, thank you notes, announcements, and notes home.
- Read a wide variety of literature and non-fiction to children and encourage them to write in those genres or forms (for example, read fairy tales to children and provide opportunities for them to retell or write their own fairy tales; read letters to children and provide opportunities for them to write letters).

Semantics—The Meaning of Language

Semantics is the major focus in the writing process. As children write to create and express ideas, as they read and re-read their own writing and respond to the content of each other's stories, they focus on the semantic aspects of print.

The teacher may:

- Extend children's background experiences by:
    - Involving them in as many real experiences as possible, such as field trips, cooking, and other hands-on activities.
    - Providing vicarious experiences when real ones are not possible, for example, by reading to them or by using the Internet, software, films, video and audio tapes, dramas, and discussions.
- Discuss these experiences and have children write about them as well as provide opportunities for children to share their writing.
- Encourage both collaborative and independent writing to provide children with opportunities to practice composing meanings in print.
- Give purposes for writing, such as to give directions, record ideas, explain events, and entertain.
- Before writing, have students recall and share what they know about the topic, imagine and create images, build their knowledge, and extend their vocabulary.
- Help children clarify and extend their ideas by enlisting a variety of ways for them to share and respond to each other's writing.

Syntax-The Structure of Language

Children need opportunities to write in a variety of syntactic patterns. Pattern writing, sentence building, and extension activities provide opportunities to play with and extend syntactic knowledge. However, it is important not to overuse such activities. It is critical to provide children with opportunities for free writing (a journal) which allows children to express themselves in their own natural way.

The teacher may:

- Provide literature with repeated syntactic patterns, such as pattern books and poetry, and encourage children to write with these patterns.
- Establish daily situations for children to write language for different purposes—to tell stories, to explain, to persuade, to ask questions, and to give directions.

Grapho-Phonics-Conventions of Print

Writing is probably the single most important activity for focusing on and practicing letter formation (print and cursive writing), letter-sound relationships (for example: phonics and spelling) and punctuation.

The teacher may:

- Provide many opportunities for writing and encourage children to use invented spellings. As children attempt to match their spoken and written language, they extend and consolidate their awareness of letter-sound relationships.

- Use alphabet books. Read such books to the children and provide opportunities for reading and writing alphabet books.
- Encourage children to develop personal word lists, such as word families and words that sound the same.
- Have a variety of dictionaries available.

The Process of Reading

Reading is the process of constructing meaning from written text. It is an active process involving the constant interaction between the mind of the reader and the text. While reading, the reader predicts, samples, and confirms hypotheses. Reading is a complex process requiring the integration and coordination of many interrelated sources of information: context, meaning, structure, and sound/symbol relationships.

Pragmatic Cues-Understanding Context

The reader uses pragmatic cues while considering the context in which the text occurs. For example, the language one would use in a formal situation is different from that in an informal situation; the language of science or nonfiction is different from the language of literature. When readers use illustration style to predict that a book with photographs contains factual information and a book with cartoon illustrations contains a make-believe story, they are demonstrating the use of pragmatic cues. Effective readers have a wide background of experience with language in many situations. To expand children's knowledge of written language in its various uses, the teacher may:

- Immerse children in literature of a variety of genres and styles.
- Read a wide variety of non-fiction to children; and discuss the information readers receive from non-print cues, illustrations, and text structure.

Semantic Cues-Understanding Meaning

Readers construct meaning when they relate the information in the text to what they know. When a text contains facts new to the reader, the information can be integrated with what is already known. The semantic context consists of the meaningful relations among words and ideas. Self-correction when the text does not make sense is an indication of the child's effective use of semantic cues. Effective readers have extensive background knowledge of a wide range of topics and related language. To build children's experiential and language base and to encourage reading for meaning, the teacher should:

- Extend children's background experiences and involve them in as many real-life experiences as possible.
- Discuss experiences to extend the children's understanding and related vocabulary.
- Relate the experiences to print, by recording the experiences and reading related text to the children so they will see reading as both enjoyable and functional.

- Encourage extensive independent reading to help build children's experiences with a range of topics.
- Give purposes for reading, such as to follow directions, to gain information, to enjoy the writing, and to respond.
- Before reading, have students recall and share what they know about the topic to build their knowledge of the concepts and vocabulary in the text before they read it.
- Encourage predictions before and during reading to promote reading for meaning.
- Help children clarify and extend understanding by enlisting a variety of ways to respond to reading such as dramas, writing, discussion, recording, and drawing.

Syntactic Cues—Understanding Structure
Readers need to know how language works and how to use information such as sentence structure, word order, function words, and word endings as they read. The syntactic context, consisting of the signals provided by the patterns of language, allows the reader to transfer knowledge of oral language to print. Self-correction of miscues that do not "sound right" is evidence of a reader's use of syntactic cues. To build children's knowledge of how language works, the teacher may:

- Read to children from a wide variety of literature.
- Provide time and opportunities for children to read independently, encouraging children to make predictions based on their knowledge of such patterns.
- Establish situations in which children can use language for different purposes—to tell stories, to explain, to persuade, to ask questions, to give directions.
- Use oral and written closure. Focus on syntactic patterns to predict and confirm.

Grapho-Phonic Cues-Understanding Sound-Symbol Relationships
Readers need to know how language works and to use information such as sentence structure, word order, function words, and word endings as they read. The syntactic context, the signals provided by the patterns of language, allows the reader to transfer knowledge of oral language to print. Self-correction of miscues that do not "sound right" is evidence of a reader's use of syntactic cues. To build children's knowledge of how language works, the teacher may help children develop an understanding of letter-sound relationships, by providing opportunities for them to:

- Hear language and then see it in print
    - See their own words and sentences in print
    - Hear language while following the print
    - Build sight vocabulary of signs, letters, labels, and other significant words in their environment.
- Use shared reading experiences, such as big books, to experience stories, songs, poems and chants. Point to the words as the teacher and child read together to reinforce directionality. Focus attention on particular letter-sound relationships.
- Provide many opportunities for writing. Encourage children to use functional spellings. As they attempt to match their spoken and written language, they extend and consolidate their awareness of letter-sound relationships.
- Read alphabet books to the children and provide opportunities for reading and writing alphabet books.

- Encourage children to develop personal word lists, such as word families and words that sound the same.
- Use word games of various types, such as whole class, small group, or individual games.
- Provide tapes of stories with accompanying books so children can follow the story in the book while listening.
- Use oral and written *cloze* procedure activities. Focus on graphic cues to predict and confirm words.

Children learn to read most effectively when the four cueing systems are taken as a whole rather than treated separately. Phonics, spelling, printing, and necessary skills of written language are learned more effectively through meaningful and purposeful use rather than in isolation.

Phonemic Awareness

Children need to have a strong understanding of spoken language before they can understand written language. This knowledge of how language works is called phonemic awareness. It is the ability to:

- Examine language independent of meaning (hear sounds that make up spoken words)
- Attend to sounds in the context of a word (understand the sequence of sounds and relationship between sounds in words)
- Manipulate component sounds (alter and rearrange sounds to create new words)

Phonemic awareness is NOT phonics. Phonemic awareness is the understanding that spoken words are made up of individual sounds and phonics is the relationship between sounds and written letters or print. They have a connection and phonemic awareness skills play a critical role in their acquisition.

Children also use the sense of sounds as they try to write. In the beginning stages of spelling, a single letter will stand for a word, then more letters join it as the child develops his understanding of words. Children who are allowed to use inventive spelling develop an early and strong sense of phonemic awareness (Cunningham, 1995).

Phonics

Children's knowledge of letter names and of letter-sound relationships is a tool with which children develop principles to unlock the alphabetic nature of our writing system. The purpose of phonics is to help children to understand the alphabetic principle, so that they are able:

- In reading—to form an approximate pronunciation that must be checked against their knowledge of real words and the context of the text.
- In writing—to form an approximate spelling of a word.

Phonetic instruction enables the learner with the task of decoding and figuring out how the alphabetic language works for the beginning readers. Adams (1990) reviewed decades of research and concluded that some readers can figure out the letter-sound system without instruction while others need explicit phonics instruction. Explicit phonics instruction speeds up the literacy acquisition of children. Cunningham (1995) says the need for this instruction is especially clear for the at risk children who have not had much exposure to reading and writing and thus have had fewer opportunities to figure out how the alphabetic system works.

How Children Learn Phonics

(Adapted from Weaver, 1996)

- By being encouraged to write independently
- By observing the teacher write down the children's ideas, or the teacher's own words and ideas
- By noticing print while the teacher reads a big book or large chart aloud
- By discussing interesting elements of sound in a reading selection (for example, alliteration, rhyme, onomatopoiea)
- By engaging in self-chosen activities with words having similar sound elements
- By hearing and participating in discussions of the use of phonics cues in the context of meaningful reading
- By receiving individual help in using phonics cues along with prior knowledge and context, in order to get meaning
- By rereading familiar materials and inferring phonics relationships

Ways of Helping Children Learn Phonics (Connecting to Print)

(Adapted from Weaver, 1996)

- Teach onset and rime patterns within songs, poems, stories that are read to and with the children.
- Guide collaborative activities focusing on onsets and rimes.
- Share and make alphabet books with children.
- Demonstrate the use of context and initial letter cues to predict a word.
- Reread favorite stories, poems, and songs from large texts that the children can follow; point to words while reading together.
- Provide small texts, tape recordings, and CD-ROM stories so the children can listen and follow the text.
- Do guided writing with children and support their efforts to write independently.
- Provide additional help and materials for the children who need it (e.g., books with alliteration and rhyme).
- Support children's own ways of learning phonics.
- Have faith in children as learners.

The Literacy Environment

Classrooms that Promote Literacy

"All children, especially those at risk for reading difficulties should have access to early childhood environments that promote language and literacy growth and that address a variety of skills that have been identified as predictors of later reading achievement." (Snow, Burns, & Griffin, 1998). Young children come from homes that support literacy to differing degrees. It is vital for teachers to create supportive environments that promote language and literacy and are responsive to each child.

An environment that promotes learning is one that is emotionally safe and accepting and is a social environment that encourages interaction between adults and children and among children themselves. When children feel safe and accepted they will be able to take the risks necessary to learn skills just beyond their current level. A predictable environment, one where children know what to expect, adds to the sense of security. The amount of validation children feel for the languages, knowledge, and abilities they bring to school directly affects their academic growth (Bredekamp & Rosegrant, 1995).

Young children learn best in a social setting that encourages language and conversation. "Talking is probably the most important thing we do here, because you learn the most when you can talk while you work," a teacher told her third grade class (Berk & Winsler, 1995). Oral language is essential to learning to read and write. Adults who help to expand the children's language and vocabulary are making a tremendous contribution to their potential for learning to read. It is simply more difficult to read and understand words that one does not speak and has never heard before (NHSA, 1999).

A growing number of students are from homes where English is not the predominant language. These children must be made to feel accepted and that their home language is valued. Research has shown that the better developed the child's first language is, the more successful he or she will be in becoming proficient in a second language (Bos & Vaughn, 1998). If an adult—teacher, aide, or volunteer—is able to speak the child's language, the child will more quickly become comfortable in the classroom and will continue to strengthen his or her first language skills.

In 1999 a policy resolution by the International Reading Association recommends reductions in class size. According to recent research on reduced class size, smaller classes are shown to lead to high reading achievement if teachers are adequately prepared to take advantage of the change through quality professional development. With smaller classes, each child receives a larger portion of the teacher's instructional time and has opportunities for greater learning. The Association recommends fewer than twenty children in each class rather than the current average of substantially more than twenty students. It also stresses that excellence in classroom reading instruction will be achieved through a combination of smaller class size, quality teacher preparation, and ongoing professional development.

Physical Arrangements of the Classroom

Classroom arrangement is an important factor in facilitating all learning, including reading and writing. The classroom that promotes literacy is print-rich, with print that is functional and serves a purpose. The classroom is also resource-rich with areas that offer opportunities for children to use reading and writing skills in many ways and at various levels. Most importantly, the environment includes adults who interact with and are supportive of children as they develop their skill, and who are models in using print for a variety of purposes.

Print-rich Environment

A "print-rich" environment surrounds the child with symbols and print, but the print must be functional, that is, print must serve a purpose. Print can be:

- A source of information
- A source of recreation or entertainment
- A means of recording
- A way to communicate with others
- A tie between home and school

Room Arrangement

The learner-focused program is not dependent on any particular model, but the principles of active learning must be kept in mind when arranging the room. Classrooms for young children must be inviting places, arranged to support a variety of activities and experiences (Bredekamp & Rosegrant, 1992). The essential elements are flexibility, adaptability, and response to children's needs.

For all areas of the room, consideration is given to safety, interference caused by noise, space available, and movement patterns. Keep in mind room for equipment such as wheelchairs, walkers, assistive devices. Locating interest areas so that materials and activities facilitate, supplement, and complement those of the others supports integration and allows children to select from and adapt the environment to suit their needs. Literacy activities can take place in any area of the room and throughout the day. A key area to promote interest in reading, however, is one where children can have immediate access to a collection of attractive stories and informational books.

Learning Centers

A classroom or other early childhood setting that is arranged in activity or learning centers encourages children to work in small groups or pairs where conversation and building on each other's knowledge can take place. Learning centers are also a way to provide for individual differences in the classroom. The individual interests of the children can be encouraged, and the teachers are able to interact more informally and comfortably with the children.

The following suggestions may be useful when planning a learning center:

- Allow children to contribute materials, ideas, questions, and tasks to the center.
- Position the center in a place that is complementary to the activities of other centers around it.
- Vary the complexity and difficulty of the tasks in the center.
- Provide a choice of activities and expectations that acknowledge a variety of learning styles.

- Consider tasks designed for independent learning or small group work.
- Consider current themes and projects.
- Choose tasks that are relevant and meaningful for the children.
- Allow for multiple ways for children to represent their learning.

Learning centers naturally incorporate printed materials to be used in the children's play. Play is important for all children, even beyond age eight, because it gives children opportunities to experiment with uses of writing, to invent freely, and to practice more approximate literacy behaviors in non-evaluative settings (Bredekamp & Rosegrant, 1995). Learning centers also include structured experiences that are selected and developed to challenge children and provide opportunities to extend children's knowledge of curriculum concepts.

Suggestions for learning centers related to language arts:

- The **library area** is an area that is comfortable and inviting, furnished with soft elements such as carpets and rugs, pillows and bean bag chairs. Children can read and be read to, look at pictures and listen to stories on a tape recorder.
- In the **writing area** children can experiment with various writing utensils, papers, envelopes, chalk boards, wipe-off boards, and computers as they practice using their writing skills for many purposes.
- A classroom **publishing area** includes wallpaper or fabric for covers, staplers, hole punches, scissors, magazines and other pictures to cut out, and a variety of writing and drawing utensils. Computers are handy for the writing and publishing programs available.
- A **computer area** in the room allows children to see their words in print and children can begin to learn word processing skills.
- **Dramatic play areas** encourage children to take on roles and act out events and experiences. Reading and writing materials can fit in as well. Children can use phone books and take messages in a house or office area; they make grocery lists and read food labels in the grocery store; or write and mail letters at the "post office." They may also recreate stories they have heard.

Learning centers and materials should be accessible to children and promote their independence as much as possible. Well-organized and labeled shelves make it easy for children to put away their materials and learn an important function of print. Learning center signs and shelf labels reflect the languages of the children in the classroom. Including Braille on these signs benefits all children.

Materials

An integrated curriculum allows for the development of literacy skills while building knowledge based on children's interests as well as the teacher's general goals. Children can write about what they are doing, research the subject in non-fiction books and magazines, work with other children discussing their findings, and illustrate their projects. Skills are taught in a meaningful, social context, not in isolation. Materials that encourage reading and writing are found in all areas of the room. Children's involvement in books and stories is encouraged through flannel boards, puppets, and real objects. Teachers also make available and help children use tape recorders, overhead projectors and computers.

Supporting Adults

Adult interaction is the most important factor in a quality early childhood setting. When adults converse with children about topics that are important and interesting to both, they expand the child's thinking and vocabulary as well as showing their care and concern for the child. "Through rich oral interactions during conferences, at writing centers, and in reading lofts, library corners, and literature circles, children enrich their pools of knowledge about the ways in which oral and written language work" (Bredekamp & Rosegrant, 1995).

Children also need to observe adults using print as a real resource. They should see adults who routinely choose to use print—write or read the schedule for the day, send a message to a parent, read a book or newspaper or record an event. The related oral language shows the child the importance of written words and the connection between oral language and print. Adults can also model using the computer for writing, making labels and signs and sending e-mail messages.

Managing the Literacy Environment

The literacy environment includes the whole classroom and the routines and activities that take place daily. Time (daily routines and schedules), materials and group management are factors teachers carefully plan. Large blocks of time are allowed for project work time, independent reading and writing, and reading with a small group or a buddy.

Children can be involved in using symbols and print during the routines and transitions of the day. Even younger children can:

- Sign in upon arrival
- Record the lunch count
- Put toys away on labeled shelves

As they participate, they will learn the functional uses of print in a meaningful way.
(For samples of daily schedules see "Active Learning in the Classroom" section.)

Grouping for Learning

Since learning takes place in a social context, pairing children to read together can extend their understanding. Reading buddies, where children read to each other or even to a stuffed animal, is a good way to encourage children to explore books, help each other, and gain confidence in themselves as readers. Children will extend the meaning of the story and sometimes relate it to their own lives.

Through both integrated curriculum and arranging for children to work cooperatively with a partner or in a small group, children are grouped according to interest and factors other than ability. This allows the child to learn from a more knowledgeable peer and to be the expert.

Students who have basic skill needs may be included in a skills group. They will be assessed frequently and be assigned to different groups when they no longer need specific skill instruction.

Multicultural Considerations

It is important for children whose first language is not English to feel accepted and valued in the classroom. Incorporating the children's home language and culture using labels, posters, books, and if possible, adults who speak the language will help all children to realize that knowing and using more than one language is an advantage. Effective teachers of children with cultural and linguistic diversities:

- Have high expectations of their children and believe that all children are capable of academic success
- See themselves as members of the community and see teaching as a way to give back to the community
- Display a sense of confidence in their ability to be successful with children who are culturally and linguistically diverse
- Communicate directions clearly, pace lessons appropriately, involve the students in decisions, monitor progress, and provide feedback (Bos & Vaughn, 1998).

According to the National Research Council (1999), children who arrive at school with no proficiency in English should be taught how to read in their native language while acquiring oral proficiency in English. They will then extend their skills to reading English.

If there are no instructional guides and learning materials and no local teachers proficient in the language, or if there are too few children to justify the development of the program to meet these conditions, the initial priority should be developing the children's abilities to speak English. The postponement of formal reading instruction is appropriate until an adequate level of English has been achieved.

Children who are learning to speak and read English must learn sounds and words in context. Reading authentic literature will help the students hear sounds in English that they may not have in their own language. As with all children, predictable books, fairy tales, big books, songs, poems, and nursery rhymes are effective resources. If the teacher does not speak the children's language, parents or community volunteers should be encouraged to come into the classroom to read stories in the native language. English speaking children will learn other languages through songs, rhymes, and poems.

Just as children learn to read in integrated, meaningful ways, writing is learned in the same way. It is important to accept the child's writing. Children who are just learning English will dictate and begin to write in the language they know best. They will gradually begin to transfer their skills to English. The child's writing can be posted for them to read and the teacher and child can choose work to include in the portfolio. The portfolio of writing collected over time will show the child's progress in both writing skills and acquisition of English language.

For children whose first language is not English, working in cooperative groups can be especially helpful. Cooperative groups help both native speakers and second language learners because they receive equal attention from teachers and have the opportunity to learn from each other. Cooperative grouping helps language minority students by:

- Allowing children to hear and produce English in a non-threatening, secure environment
- Creating an atmosphere where children can better adjust to the culture of the school, creating a supportive climate for children to make friends with children who speak other languages
- Helping children to raise their self-esteem because they can be active participants who can assume authority in the group and learn from their peers

Components of a Literacy Program

Literacy tasks influence children's motivation for literacy learning. Children must have opportunities to be engaged in authentic purposes for speaking, listening, reading, and writing. Open-ended tasks allow children to make personal choices among literacy tasks. These choices provide challenges and allow students to take control of their own learning through planning, evaluating, and self-monitoring. Literacy tasks should foster collaboration and constructive comprehension through speaking, listening, reading, and writing.

Self-motivated readers and writers:

- Gain satisfaction from reading and writing
- Choose to read and write
- Ask questions about books and pieces of writing
- Talk about books, authors, and stories

Self-directed readers and writers:

- Choose what they can read successfully
- Use a variety of clues to predict and self-correct
- Use a variety of strategies to create words and sentences

Self-regulated readers and writers:

- Monitor and check their own reading and writing
- Self-correct
- Repeat
- Voice and finger point as needed
- Stop when something doesn't make sense and return to the text to get meaning

The components of a literacy program provide a framework for literacy learning in the classroom. A variety of learning experiences are essential for promoting early literacy. The components of a literacy program support natural language learning through immersion, demonstration, expectation, explicit instruction, responsibility, employment, and response.

Components of a Balanced Literacy Program

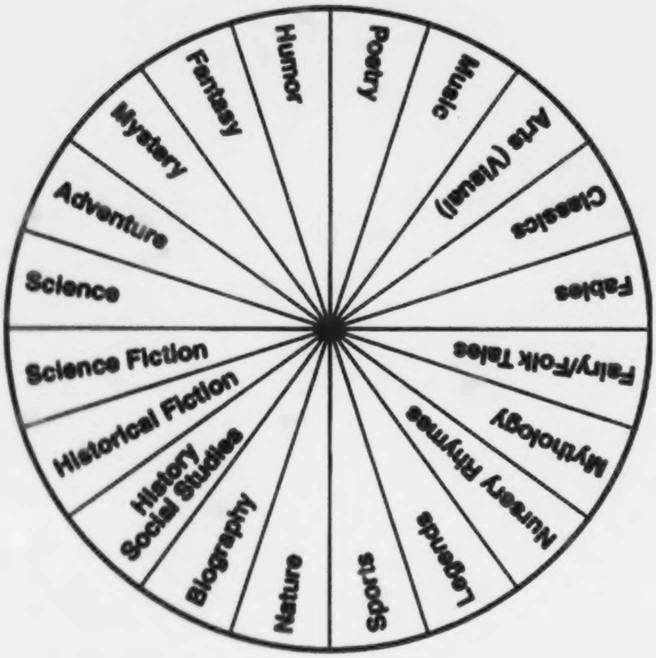
READING	WRITING
Read Aloud	Modeled Writing
Guided Reading	Interactive Writing
Shared Reading	Shared Writing
Independent Reading	Independent Writing
Collaborative Reading	Collaborative Writing

Read Aloud

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Provides models of fluent reading ▪ Demonstrates purposes for reading ▪ Provides exposure to text above child's reading level ▪ Increases comprehension ▪ Develops sense of story ▪ Develops "Book Language" ▪ Creates a community of readers ▪ Motivates children to read	▪ Done for children	▪ Whole class ▪ Small group ▪ Fluent reader reads ▪ Listen to tape ▪ Student/ teacher talk about text	▪ Engages interest ▪ Models fluent reading ▪ Invites responses and reflection ▪ Selects appropriate text that represents a diverse society ▪ Models thinking as engages with text, including informational texts.	▪ Are engaged ▪ Respond and reflect ▪ May select text

Reading with Children

The read aloud experience immerses children in language, the styles of different authors and illustrators, and a variety of genre. In the home and at school, listening to text read aloud should be enjoyable. Children who are introduced to literature in their parent's lap associate print with positive images that last a lifetime. The read aloud experience should begin early and continue well past the time children learn how to read. Children should be read to at least once a day but preferably several times each day using high quality materials. Careful selection of text should include a variety of genre that represents a diverse society.


Humor
Poetry
Music
Arts (Visual)
Classics
Fables
Fairy/Folk Tales
Mythology
Nursery Rhymes
Legends
Sports
Nature
Biography
History Social Studies
Historical Fiction
Science Fiction
Science
Adventure
Mystery
Fantasy

Since the language in books is different from the language of speech, children need to experience many literary forms. Literature offers opportunities to become emotionally involved in fantasy. Children will become readers if their emotions have been engaged, their imaginations stirred and stretched by what they find on the printed page. If children are to experience the full impact of literature, teachers must plan a program of literacy experiences which is much more than a list of unconnected poems and stories. The systematic study of wisely selected poems and prose will not only enrich children's lives, but will enable children to realize the personal satisfaction which comes from reading.

Children also need to hear and see a variety of non-fiction forms such as labels, directions, letters, and information books. Children who have been read to in their early years develop a familiarity with the language of books and learn that both pleasure and information can be gained through reading. Reading non-fiction may be their major source of knowledge about the world. Children in the primary years should experience a wide variety of non-fiction text and should have opportunities to learn how to locate and use information.

Expressive (personal)	Journal, learning log, note, letter, diary, dialogue, opinion, invitation, thank you note, interview.
Narrative (story)	Folk tale, fairy tale, animal story, fable, adventure, legend, cumulative and repetitive pattern story, contemporary realistic fiction, fantasy, cartoons
Poetic	Nursery rhyme, rhythmic verse, alliterative and rhyming poems, limerick, free verse, word play, riddle, child created poem, cinquain, song
Dramatic	Mime, puppet play, acting out stories, improvisation, role play, fingerplay, choral reading, skit, scripted play
Expository (non-fiction)	Sign, label, caption, list, directions, instructions, description, report, recipe, explanation, advertisement, newspaper article, magazine article, persuasion or argument, diagram, graph, documentary, interview

Reading aloud to children exposes them to text and genre that might otherwise be too difficult for them to read and comprehend independently. Children experience models of fluent reading and models of good writing. These models illustrate reading and writing done for many purposes. Talk during the reading is natural and should include predictions and speculations which encourage reflective thinking. Discussions about the text can help develop a sense of story, book language and increase comprehension.

Reading to children daily develops a community of readers with shared experiences in literacy. Children are motivated to read as they build an appreciation and enjoyment of the printed word.

How to Read with Students

- Select a purpose for reading such as a particular story, author, illustrator, genre, literary devices, theme, or topic.
- Select the text and pre-read to determine an area of emphasis.
- Develop a book introduction which highlights the cover of the book, the title, the author, the illustrator, and predictions about the text. Include background information which may be needed for a better understanding or added enjoyment.
- Read with enthusiasm and expression.
- When reading non-fiction, demonstrate the features of the text such as titles, table of content, index, glossary, headings, margin notes, photos, captions, charts, tables, diagrams, and highlighted text.
- Activate the students' listening for comprehension of critical information represented in the author's message.
- Invite questions, opinions, and comments about the text. Activities related to the text may follow as a group experience, center activity, or a student selected individual project. The text should be available for students in a classroom library or at a center so they can return to the text independently.

Guided Reading

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Promotes problem solving while reading for meaning ▪ Provides guidance, demonstration, and explanation at all reading levels ▪ Provides the reader challenges and successes in a supportive environment	▪ Done by children with teacher support	▪ Small groups ▪ Homogeneous grouping ▪ Groups are fluid	▪ Matches children with text ▪ Supports and coaches through the book introduction and strategy prompts ▪ Teaches skills, strategies, and problem solving ▪ Monitors and assesses ▪ Moves children to new groups based on assessment of reading level	▪ Do initial reading ▪ Use support as needed ▪ Check and self-correct their own reading

Guided Reading

During guided reading children focus on construction of meaning from the text while using problem solving strategies with support from the teacher. The goal of guided reading is to help children use independent reading strategies. The teacher works with a small group of students with similar reading abilities. Children are grouped and regrouped based on teacher observations and assessment. The teacher selects an appropriate book for the group that is at the children's instructional reading level. The text should introduce or reinforce appropriate reading challenges for the group. At the emergent reading level the teacher guides the children in exploring the language structure and vocabulary prior to the first reading of the text which provides a high level of support. A discussion of reading strategies the children will use or have used in the past serves as a reminder of what the children will try if they come to a word in the text they do not know. Each child reads the whole text at all levels of guided reading. When reading non-fiction children may not read the whole text. An index or table of contents may guide their reading as they read to gain specific information. At the emergent level of guided reading each child reads aloud at their own pace. At more advanced levels of guided reading the children read silently followed by discussion of story and their use of the reading strategies (Fountas & Pinnell, 1996).

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Guided reading provides the opportunity for teachers to observe and evaluate each child's reading in action. Through the use of strategy prompts, the teacher can call attention to specific concepts of print, a particular cue system, or a particular reading strategy.

Strategy Prompts

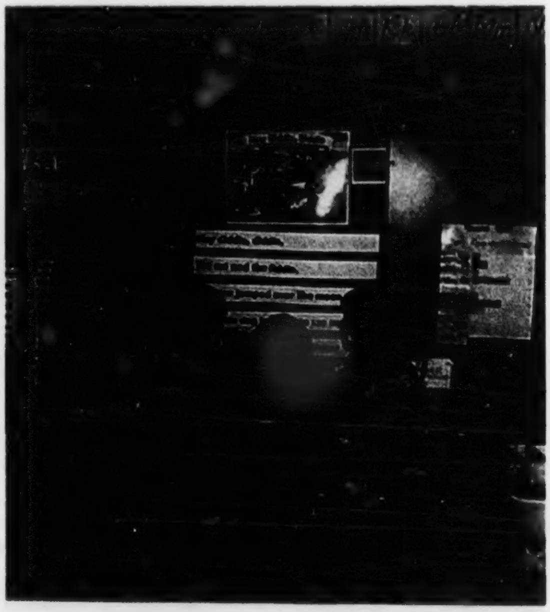
Meaning (Semantic)
Does that make sense?
Check the picture.
What happened in the story when ________ ?
Would you reread this?

Structure (Syntactic)
Does that sound right?
Would you reread this part?
Could there be another word that might fit here?

Visual (Graphophonic)
Does it look right?
Where are you going to start reading?
What sound/letter does it start with?
What would you expect to see at the beginning, middle, and end of ________________ ?
Can you point to ________________ ?

Self Corrections and Cross-Checking
Can you find a part that was tricky for you?
Are you right?
Could it be ________________ ?
It could be ________ , but look at ________.
Look more closely at ________________.
How did you know that?

The format of a guided reading session changes as students' abilities progress. The amount of teacher support is high for emergent readers. Gradually teacher support decreases as children move to early fluency and fluent guided reading. Language mini-lessons introduce or reinforce areas of need observed by the teacher. Discussion may include retelling or responding to the text which connect children's own experiences. Follow up activities may extend the session into other content areas or different modes of creativity.



Sample Teaching Sequence for a Guided Reading Lesson

Teacher decides the focus of the lesson

What reading behaviors need demonstration and development?

Selection of text

Is the text supportive of the focus?
Is the text sufficiently challenging?
Is the text of interest and does it appeal to children?

Set the Scene

Provide a book introduction that arouses interest and motivates children to read the text. Highlight the cover, title, author, and illustrator. Allow students to link the book to their personal experiences.

Picture Walk

Walk through the book with emergent readers. Invite the readers to talk about the illustrations, which further develops meaning. Focus on language that may be difficult or unfamiliar to the reader.

First Read

Children read independently. Teacher observes and offers support through prompts and strategy reminders as needed. The teacher watches for a teaching point that will reinforce a reading strategy.

Return to the Text

Talk about the story. Student can reread favorite parts aloud in pairs or independently. The teacher takes advantage of the opportunity to teach reading skills and strategies in the context of the story based on their observations as children read.

Respond to the Text

Rereading independently or with a partner, writing, art and craft activities, and dramatization are ways children can respond to what they have read.

Running records are an assessment done by the teacher as a child reads. The running record is an assessment of the reading behaviors a child uses or neglects when they come to an unknown word. The teacher makes a check mark for each correct word said as the student reads. Reading miscues and self-corrections are recorded using standard conventions. The teacher analyzes the record to see if the child uses or neglects meaning, structure, and visual cues. This information guides the teaching points and strategy prompts used by the teacher to support the reader as he or she moves towards independence.

Shared Reading and Writing

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Demonstrates early strategies and skills ▪ Builds sense of story and ability to predict ▪ Demonstrates the process of reading and writing ▪ Highlights conventions of language ▪ Expands experiences and vocabulary ▪ Provides natural integration of listening, speaking, writing, and reading ▪ Provides opportunity to behave like a reader and writer in a safe environment	▪ Done for, with, and by children	▪ Whole class ▪ Small group ▪ Big books ▪ Charted text or poems ▪ Multiple readings of the same text ▪ Uses variety of genre ▪ Uses material for emergent, early, and fluent readers and writers	▪ Invites predictions, responses, and reflections ▪ Provides modeling of ongoing thinking done by a reader and writer ▪ Acts as the scribe during writing ▪ Demonstrates new forms of text	▪ Predict, join in, and make suggestions about the reading and writing ▪ Respond and reflect ▪ Try out new strategies and skills

Shared Reading and Writing

Shared reading is an extension of the bedtime story experience. It is a read and think aloud demonstration of the process that effective readers use. The text is large which enables a small group or whole class to be introduced to a rhyme, poem, or big book story. Rhymes, poems and songs are great text for shared reading because of the elements of rhyme, rhythm, and repetition. A story must have predictable language, supportive illustrations, humor, a story-line, and characters with whom children can relate.

***Shared reading** can be used to teach the following strategies and conventions:*

- *Directionality*
- *Layout (title page, table of contents, glossary)*
- *Predicting using meaning as the best guide for word-solving*
- *Self-correcting strategies through cross-checking and meaning (semantic), structure (syntax), and visual (graphophonic) cues*
- *Word attack skills (phonics, affixes, looking for little words in big words)*
- *Conventions of punctuation*
- *Conventions of spelling*
- *Conventions of grammar*
- *Introduce a new genre*

Fountas & Pinnell, 1996

Shared reading focuses on making meaning from the printed text. The teacher demonstrates the use of the reading system and models what good readers do. During the first reading, children listen and watch as the teacher reads. As the reading continues, students are encouraged to read with the teacher, finish predictable sentences, and take over the reading. Children are able to learn what they are ready to learn as they practice reading behaviors in a non-threatening environment. The teacher demonstrates what good readers do before, during, and after reading. Effective readers consider the purpose for reading, plan, preview, predict, check, self-correct, confirm, respond, and reflect (Cambourne, 2000).

Masking letters, words, and phrases in familiar text is a great way to focus on specific detail in print. A paper frame, colored highlight tape, wooden dowel used for a pointer, or a marker can be used to call attention to detail in print at even the earliest stages of reading. It is crucial that every eye be focused on a detail in print at the same time that the accompanying sound is stated. This provides the eye-voice-ear link that helps children understand print in even the earliest stages of reading. The detail that is masked is discussed in the context of whole word, phrase, sentence, or piece. The teacher must continue to reinforce: Does it make sense? (Semantic cueing system), Does it sound right? (Syntactic cueing system), and Do the letters match your prediction? (Graphophonic cueing system). The technique of masking helps teachers assess "on the go" as children offer what they know about print.

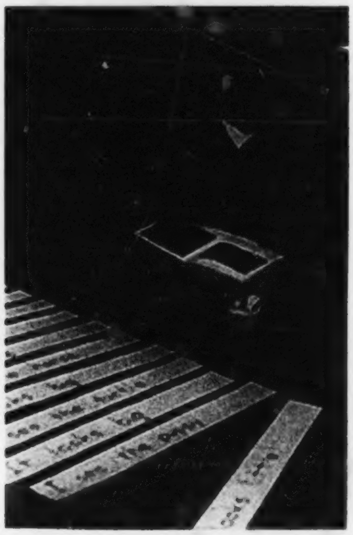
Masking questions: Who can find…

- *The first word we read on this page?*
- *A letter they know?*
- *A word they know?*
- *A letter with the sound ______ ?*
- *A word with one, two, three letters?*
- *A color word?*
- *An action word?*
- *A word with the "ing" ending?*
- *A word that rhymes with ____ ?*
- *A period (or any other punctuation)?*
- *A contraction for did not?*

Fisher, 1991

Design for a shared reading lesson:

- Teacher selects the text, the objective for the lesson, and determines how to group children.
- Select text large enough for everyone to read. Many teachers make their own text using chart paper or overhead transparencies.
- Prepare an introduction to the text ahead of time that creates interest. Call attention to the title, author, and special features of the text.
- Read the story and allow spontaneous comments and questions.
- Read it again and encourage the children to participate. Address the teaching point and discuss what the children notice.
- Offer these response opportunities: independent reading, writing, story map, reports, research, letters, choral reading for another audience or drama.
- Make the text available for children to return to the text during the time of their choosing.
- Return to previously read text for enjoyment, to focus on additional strategies and conventions, or to link a new text to an old favorite.



Independent Reading and Writing

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Provides opportunities for independence ▪ Provides opportunities to read and write for many different purposes and use many strategies ▪ Supports development ▪ Allows individuals to work in interest areas ▪ Increases ability to write words and use punctuation ▪ Fosters creativity and ability to compose text ▪ Promotes pleasure in reading and writing ▪ Challenges the reader and writer in a variety of situations ▪ Promotes collaboration among peers	▪ Done by children	▪ Whole class ▪ Small group buddy reading ▪ Independent reading ▪ Self selected material ▪ Journaling ▪ Story writing ▪ Letter writing ▪ Text retelling ▪ Speech balloons ▪ Labeling ▪ Center activity	▪ Organizes text by level, content, and/or author ▪ Models how to locate and use materials ▪ Monitors and assesses ▪ Provides opportunities to share experiences	▪ Read and write independently ▪ Read and write for themselves ▪ Refine self-monitoring and self-correcting strategies ▪ Work with peers to edit writing

Independent Reading and Writing

During independent reading children can read on their own or with a partner. A wide range of books and magazines spanning a wide range of reading levels is needed. Even the youngest children should have access to quality nonfiction on a regular basis. Material may be organized by author, subject, reading level, and genre. Colored dots, stickers, labeled shelves, or book baskets make materials easy to locate and return to the proper place. Organizing materials into categories and explicit teaching of how to locate material promotes wide reading. An organizational system like book boxes for each child allows readers to select text at their specific reading level and interest. Rereading text is encouraged for fluency. Independent reading promotes confidence through successful experiences. Independent reading is critical for students to practice reading behaviors and strategies in a variety of text.

Independent writing provides the opportunity for independent production of written text for self-selected purposes. Writers increase their ability to use different forms of writing. A piece of writing may start at the draft stage, be revised, proofread, published and shared with the group. All pieces of writing don't have to be published. Sometimes the writing leads to a stronger idea or another interest. A piece of writing may be abandoned before it is published. Students can organize their pieces of writing in a folder or a writing tub. This collection serves as a record of their development and a great way to organize pieces that a student might return to in the future for further draft work.

My Reading Log Name ______________

Date	Title	Pages Read	Comments/ Responses

My Writing Log Name ______________

Date	Title/Story/ Topic	First Draft	Revised	Edited	Published or Shared	Teacher's Comments

Children support each other and share ideas during independent reading and writing. A community of readers and writers develops in which children are comfortable to take risks and gain confidence in their abilities. Reading and writing logs serve as a record of a child's work. Logs are a useful assessment tool for students, teachers, and families. The log provides a history of the child's literacy development in both reading and writing. Logs can also be used to keep track of spelling work, the mechanics of writing used in a piece, or reading strategies used during independent reading. Reading/writing logs and reading/writing conferences are ways to guide children in supporting each other and keep a record of their literacy development.

Interest inventories can help teachers identify student interest in reading and writing, school-related activities, home activities, and interest in language. This information is used to guide student selection of reading material, topics for writing, and curriculum. Interest inventories can provide a great deal of insight into children's thinking and their perceptions about writing and reading tasks.

Teacher/child conferences and peer conferences are another source of support for developing readers and writers. Conferences offer the opportunity for the reader and author to talk about their work and reflect upon the meaning of a particular piece.

Developmental continuums for reading and writing are a synthesis of observations made about a child's development in reading and writing. Observations are usually recorded by using anecdotal notes of daily observations and/or checklists. Knowing the development of each student guides teachers to make wise decisions about teaching points for the whole class, small groups, and individual conferences.

Collaborative Reading and Writing

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Provides opportunities for collaboration in speaking, reading, and writing ▪ Fosters communication ▪ Develops a community of readers and writers	▪ Done by children with peers	▪ Usually done in small groups	▪ Monitors and assesses ▪ Provides opportunities for children to share their work ▪ Teaches routines	▪ Collaborates and works independently on reading and writing projects ▪ Investigates interest areas ▪ Shares prior knowledge with peers

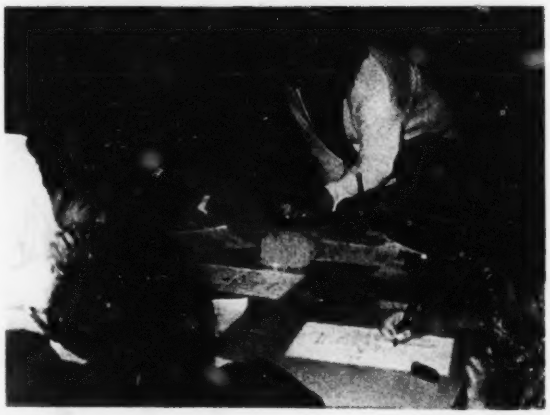
Collaborative Reading and Writing

Collaborative reading and writing projects can be facilitated in a number of ways in the classroom. Literature circles, learning centers, and research study teams are just a few ways to organize collaboration. Collaborative reading and writing projects can be extensions of theme studies that are led by child choice and interest. The teacher's role is to organize time and resources which help to create a supportive environment for children as they work together.

Literature circles are driven by student choice. Students form temporary groups based on their mutual interest in a particular book. In a class of twenty-five children, five to seven groups might be meeting at the same time to talk about different books. The reading material used are unabridged books that represent a diverse selection of genre and topics. The groups might be working with a common author or theme. The children discuss their own topics and questions related to the text. In one model each child is responsible for duties of a role in the group such as a discussion director, an illustrator, summarizer, vocabulary specialist, or an investigator. The teacher's role becomes that of a facilitator (Daniels, 1994).

Learning centers are interest areas set up in the classroom. These areas provide opportunities for children to study a concept in greater depth independently and cooperatively. Learning centers are designed with specific curriculum objectives in mind. The areas should have materials that are accessible to choices for learners.

Research teams are similar to literature circles in that they are most effective when children work in their interest areas. As the class is studying a specific theme, small groups of children can come together to research specific questions or interests. Through research teams a teacher can integrate skills from several curricular areas into a learning experience that is meaningful and interesting to the learner.



Literature circles, learning centers, and research teams are just a few examples of cooperative learning. Each opportunity requires the teacher to plan time for children to work together. The framework of a reading and writing workshop helps teachers organize a large block of uninterrupted time for reading and writing activities which encourage collaboration. During a reading and writing workshop, teachers can plan time for guided reading, reading aloud, shared reading, modeled writing, response to writing, interactive writing, word work and opportunities for collaboration and independent work. The workshop time follows a predictable flow everyday even though the activities may change from day to day. Typically, the workshop time starts with a whole group meeting. The meeting may include reading aloud, shared reading or writing, interactive writing, word work, and research teams as a few of the activities that may be organized after the group meeting. At the close of the workshop block, the group meets together again. This allows the teacher to revisit a concept or activity that was previously introduced and link it to children's work. Many professional books explain how to organize time, children, and materials for reading and writing workshops.

Modeled Writing				
Purpose	**Teaching/ Learning Experience**	**Characteristics**	**Teacher**	**Children**
▪ Demonstrates how writing works ▪ Models how writers plan and review ▪ Models construction of meaning ▪ Demonstrates the uses and purposes of writing ▪ Models skills and strategies ▪ Models the process of composition ▪ Models how to identify an audience for writing	▪ Done for children	▪ Whole class ▪ Small group ▪ One-to-one coaching ▪ Model a variety of genre that represent a diverse culture ▪ Model emergent, early, and fluent reading and writing	▪ Reads/writes ▪ Thinks aloud ▪ Provides model of ongoing thinking done by a writer ▪ Models strategies ▪ Explains why ▪ Invites responses	▪ Are engaged ▪ Respond and reflect ▪ Apply skills modeled when working on independent writing

Modeled Writing

Modeled writing is a demonstration of the process writers use as they communicate ideas and experiences. The teacher thinks out loud as he or she models stories, journal writing, poems, songs, notes, lists, letters, informational text, or instructions. Any stage of the writing process can be modeled:

Prewriting:
- Attending to conventions of print
- Gathering ideas for writing

Drafting:
- Constructing personal meaning
- Discovering what ideas mean

Revision:
- Talking and thinking about ideas
- Practicing effective communication
- Clarifying and extending meanings

Proofreading:
- Attending to conventions of print

Publishing:
- Developing the writing to a level appropriate for the intended purpose

Presenting:
- Sharing and celebrating the writing

During modeled writing, the teacher creates the text as the children watch. The teacher explains the reasons for what he or she is doing as he or she writes, and may choose to reveal his or her thinking process. Writing is done on chart paper, an overhead projector, a chalkboard, a white board, or a computer presentation. The print must be large enough for everyone to read.

Modeled writing can be used for introducing the process of writing or for introducing a new genre. It can also be used to reinforce an aspect of writing with which a small group of children is struggling or be used to reveal the teacher's metacognitive process as he or she composes text. Modeled writing should occur often if not daily. Children's needs, teacher observations, and district curriculum guide what aspects of writing are to be the focus of the next modeled writing lesson. Anecdotal notes of new skills used by individual children during independent writing serve as a valuable assessment tool to share with children and families (Cambourne 2000).

Interactive Writing

Purpose	Teaching/ Learning Experience	Characteristics	Teacher	Children
▪ Develops sound/symbol relationships ▪ Develops concept of how print works ▪ Provides opportunities to plan and construct text ▪ Builds understanding of the connection between reading and writing ▪ Advances spelling skills	▪ Done by children with teacher support	▪ Usually small group ▪ Use conventional spelling ▪ Based on a group experience or read aloud	▪ Collaborate to compose text ▪ Supports and coaches through questions and prompts ▪ Supports letter recognition and sound symbol relationships ▪ Links words to be written to children's names ▪ May write difficult words or parts ▪ Monitors and assesses	▪ Hear and identify sounds in words ▪ Represent sound/symbol relationships ▪ Begin linking known words to unknown words ▪ Use familiar chunks (word endings) ▪ Make generalizations about print ▪ Collaborate to compose text ▪ Self-correct ▪ Try out new strategies and skills ▪ Use supports as needed

Interactive Writing

Interactive writing offers the opportunity for children to take an active role in the composition of text by actually holding the pen and doing the writing. The teacher's role becomes that of a coach as he or she builds upon what the child knows about print. Through questions and direct instruction, the teacher focuses the children's attention on the conventions of print. Questions and prompts used by the teacher vary according to the knowledge and needs of the children. Interactive writing models authentic reasons for writing. An interactive writing session might focus on a familiar children's literature selection, a topic of class study, or a shared group experience. The group negotiates the list, sentence, or retelling. The writing is done using the children's words. The group consensus is reached, the message is repeated aloud along with clapping, snapping, or word counting. The teacher then looks for the first student to begin the writing. As a word, list or sentence is finished, the group rereads while one child points to each word. The print is added to the classroom environment so children can return to the message for independent reading opportunities. The text is revisited several times as spacing, punctuation, and spellings may be highlighted as reminders of the lesson. Interactive writing provides the opportunity for authentic instruction in phonics and linguistic patterns within meaningful text.

Expectations and guidelines for interactive writing over a school year

Beginning of year	**End of the year**
▪ Simple text such as labels	▪ More complex text
▪ Text completed in one day	▪ Text constructed over several days
▪ Repeat orally the word or line to be written	▪ Count words before writing begins
▪ Teacher may write challenging words	
▪ Extra attention to letter formation and spacing	

In the beginning lessons, the teacher attends to letter formation and spacing. Lessons may be ten minutes long at the beginning of the year and up to thirty minutes after some experience with interactive writing. As children gain competence, attention may move to punctuation, capitalization, prefixes, suffixes, and phonetic structure.

Teacher sensitivity is needed to value children's attempts and approximations. The teacher needs to explain that because others will be reading the text, conventional spelling must be used. Correction tape or even mailing labels can be used to allow children to revise their writing as they work.

In an interactive writing session, the text is revisited several times as spacing, punctuation, and spellings are highlighted as reminders of the lesson. The print is added to the classroom environment so children can return to the message for independent reading opportunities. The text may be extended during another interactive writing session (Button, Johnson, & Ferguson, 1996).

Many teachers take notes during or right after an interactive writing session. The teacher takes notes of what each child knows about print as they work. Any confusions are also noted as each takes his/her turn with the pen. The teacher's notes then become a guide for future teaching points in interactive writing, shared and modeled writing, guided reading, or shared reading.

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Descriptors of Listening Development

Early Primary	Later Primary
Dispositions	
The child: ▪ Grows in confidence; shows interest in what people have to say ▪ Attends with interest to orally presented stories, poems, rhymes, drama, music, and prose ▪ Is beginning to consider thoughts and ideas of others	The child: ▪ Shows increasing confidence ▪ Is becoming a more active listener ▪ Gives a positive response to orally presented stories, poems, rhymes, drama, and prose ▪ Shows increasing interest and awareness of another person's point of view
Skills	
The child: ▪ Builds upon listening skills developed during the preschool years ▪ Looks at a speaker ▪ Is sensitive to non-verbal communication ▪ Is learning to listen to the ideas of others in conversations and discussions ▪ Asks for repetition, restatement, or general explanation when meaning is unclear ▪ May begin to pinpoint his or her own source of confusion and ask about word meanings ▪ Is able to follow simple directions ▪ Moves from listening for general detail to listening for specific detail for longer periods of time	The child: ▪ Refines the development of previous skills and expands his or her repertoire ▪ Is becoming sensitive to the need to be silent, to wait, to respond, as appropriate ▪ Is learning to listen to ensure mutual understanding and to sustain conversation ▪ Is learning to listen critically for main idea, sequence, and other key concepts ▪ Recognizes unfamiliar words and asks what they mean ▪ Is able to understand and follow more complex directions ▪ Is becoming more sensitive to detail in content and to sounds within words

Descriptors of Listening Development

Early Primary	Later Primary
Skills	
The child: ▪ Is able to distinguish between many types of speech, (informal chat, a warning, a joke, a poem) ▪ May be inattentive at times or easily distracted ▪ Focuses on whole (content) rather than part (detail) when listening to a story ▪ Is becoming more able to listen effectively to a variety of media (radio, films, tapes, television) ▪ Demonstrates an increasing awareness of facts, details, feeling, and values	The child: ▪ Is able to distinguish between social interaction and information transaction within these categories (praise and flattery) ▪ Shows increasing attentiveness and less distractibility ▪ Is learning to compare and find relationships in stories, poems, and conversations ▪ Demonstrates an increasing ability to use facts, details, feelings, and values
Knowledge	
The child ▪ May have listening vocabulary of over 20,000 words by age seven ▪ Understands that ideas and information may be gained through listening	The child: ▪ Experiences a rapid increase in vocabulary in a wide variety of areas

Descriptors of Speaking Development

Early Primary	Later Primary
Dispositions	
The child:	The child:
▪ Responds confidently when approached	▪ Maintains dialogue with increasing confidence and fluency
▪ Needs a listener, yet does not consider a listener's needs (egocentric)	▪ Wants listener's close attention
▪ Is moving toward awareness of a listener's needs	▪ Uses more explicit and objective language as he or she becomes aware of a listener's needs
▪ Shows interest in certain aspects of spoken language such as rhyme and rhythm	▪ Strives for mutual understanding
▪ Shows interest in comparing and contrasting words	▪ Is curious about some of the spoken language used (puns, riddles)
▪ Is interested in playing with words and sounds in words, "creates words"	▪ Is curious about word meanings and wants to try more precise expressions
	▪ Is interested in other ways to communicate (sign language, secret ideas)
Skills	
General The child:	The child:
▪ Builds upon speaking skills developed during the preschool period	▪ Refines the development of previous skills and expands his or her repertoire
▪ Uses language for different purposes, (greeting, informing, requesting)	▪ Demonstrates increasing ability to use language for different purposes
	▪ Refines his or her use of language and expands repertoire to include: to maintain group, to hypothesize and to express doubts

Descriptors of Speaking Development

Early Primary	Later Primary
Skills (continued)	
General ▪ Uses language in a variety of ways: – To reason – To predict – To direct – To maintain self – To imagine – To project – To report on past experiences –	
▪ Is beginning to adapt or change language	▪ Demonstrates increasing adaptability of language to suit the needs of a listener or situation
▪ Sometimes speaks too loudly or too softly	▪ Is becoming sensitive to the need to modulate voice to the environment
▪ Begins to show feelings through talk rather than non-verbally	▪ Shows increasing ability to use talk to express feelings
▪ Begins to follow implicit rules for conversation or narratives, (taking turns, staying on topic)	▪ Demonstrates increasing ability to follow rules for conversations and narratives
▪ Is moving from egocentric point of view; language is becoming more specific	▪ Demonstrates increasing understanding of listener's needs; language becomes more specific

Descriptors of Speaking Development

Early Primary	Later Primary
Skills	
Phonology The child: ▪ Is able to use most of the phonemes in our sound system, with the exception of some sounds that are closely related	The child: ▪ Uses phonemes increasingly in conventional ways
Semantics The child: ▪ Shows signs of widening vocabulary as interests and activities begin to expand; retains some baby talk ▪ Is becoming sensitive to the unwanted effects of poor word choice in speech ▪ Uses subjective language (meaning is clear to child but not always to listener) ▪ Is beginning to ask for clarification and explanation of ideas and concepts ▪ Asks about words/ideas not understood ▪ May substitute own notions rather than seek answers ▪ Asks many fact-finding questions leading to more how and why questions about his or her own physical world ▪ Focuses on whole (content) rather than on part (detail) when retelling a story ▪ Is beginning to be able to get to the point, to tell a story in a proper sequence	The child: ▪ Increases in vocabulary that reflects a growing range of interest and knowledge ▪ Is becoming more thoughtful in choice of words ▪ Uses more objective language (meaning clear and specific) ▪ Increasingly asks for clarification and explanation of ideas, concepts, and words ▪ Is beginning to link ideas together ▪ Develops and/or adapts ideas from a variety of sources ▪ Uses questions to seek casual explanation ▪ Shows an increasing ability to integrate parts (details) with the whole when retelling a story ▪ Demonstrates increasing ability to get to the point, to control language, to tell a story in proper sequence

Descriptors of Speaking Development

Early Primary	Later Primary
Skills	
Syntax The child: ▪ Shows rapid growth in language usage and structure ▪ Manipulates language and experiments with words, (uses original expressions) ▪ Is acquiring his or her own grammar (uses rules to generate great variety of sentences) ▪ Seeks rules and over-generalizes the use of rules for tenses and plurals ("I does it," "mouses") ▪ Ignores passive form and focuses on word order and negative forms (many kindergarten children choose a picture of a cat chasing a dog to illustrate "The cat is chased by the dog.")	The child: ▪ Uses more complex sentence structures, more conjunctions, prepositions and connectives (when, if, because, since, probably) ▪ Demonstrates increasing use of conventional sentence structures ▪ Refines and expands his or her own grammar ▪ Begins to control exceptions to grammatical rules for tenses and plurals ▪ Is beginning to use passive form
Knowledge	
The child: ▪ May have a speaking vocabulary of over 5,000 words by age seven ▪ Attempts to understand relationships (space, time) ▪ Is becoming aware of how to use language appropriately in social situations ▪ Is becoming aware of the needs of listeners ▪ May initiate dialogue	The child: ▪ Experiences a rapid increase in speaking vocabulary in a wide variety of areas ▪ Uses, but tends to confuse, abstract terms (ask/tell, more/less, older/younger, as in "I'm going to tell my teacher if I can go.") ▪ Shows increasing awareness of how to use language appropriately in a wide array of social situations ▪ Shows increasing awareness of needs of listener and need to make self understood

Descriptors of Reading Development

Pre-conventional	Emergent
Dispositions	
The child: ▪ Shows curiosity about print in the environment ▪ Enjoys being read to ▪ May think he or she can read ▪ Plays with books, paper, pencils ▪ Plays at reading: – Cloth books – Board books – Picture books	The child: ▪ Knows the rewards of reading and rereading; further reading ▪ "Role plays" self as reader relying on memory (rote reads) ▪ Explores new books ▪ Chooses ▪ Returns to favorite books ▪ Has an expectation of success in learning to read ▪ Is an avid and independent reader, who is making choices from a wide range of material ▪ Is beginning to show an interest in word forms and spellings

Descriptors of Reading Development

Early	Fluent	Expanding
Dispositions		
The child: ▪ Enjoys re-reading favorite books ▪ Is beginning to explore new kinds of texts independently ▪ Usually chooses short books with simple narratives and illustrations ▪ Reads silently for short periods when encouraged to do so ▪ Shows some interest in words encountered in print ▪ Shows interest in topics, characters, and events, and asks questions for clarification ▪ Shows broadening of interests in literature ▪ Accepts miscues/errors as part of striving to get meaning	The child: ▪ Chooses to read silently when given opportunity to do so ▪ Prefers silent reading; reads silently for increasing periods of time ▪ Begins to set own purposes for reading ▪ Reads books for interest, by favorite authors ▪ Is willing to talk about topics, characters, and events ▪ Shows keen interest in words ▪ Makes an effort to read text that goes beyond present knowledge and linguistic development	The child: ▪ Is an avid and independent reader, who is making choices from a wide range of materials ▪ Reads for a variety of purposes ▪ Prefers silent reading (speed improves); reads silently whenever it is possible and without prompting ▪ Chooses confidently and wisely among a range of reading matter available ▪ Persists with text that goes beyond immediate knowledge and linguistic development

Descriptors of Reading Development

Pre-conventional	Emergent
Skills	
The child:	The child:
▪ Reads pictures rather than print, attempts are picture-governed, moving from labeling and commenting to story-telling ▪ Approximates some environmental print such as signs and labels in context	▪ Begins print-governed attempts ▪ Uses pictures to predict text ▪ Actively seeks to link meaning with print in the environment ▪ Recognizes some environmental print such as signs and labels ▪ Recognizes own name
▪ Is not yet able to tackle print independently ▪ Relies on another person to read the text aloud	▪ Gains some meaning even when environment cues are absent ▪ Thinks about what may happen and uses this to unfold the story ▪ Is growing in the ability to predict meanings ▪ Is developing strategies to check predictions against other cues such as the illustrations and the print itself

Descriptors of Reading Development

Early	Fluent	Expanding
Skills		
The child: ▪ Uses picture for checking rather than prediction		The child: ▪ Can tackle some demanding texts and can cope with reading across the curriculum
▪ Is well launched on reading but still needs to return to a familiar range of texts; often re-reads favorite books ▪ Makes greater use of context for predictions ▪ Makes more accurate predictions ▪ Actively uses alternative cues on the page (picture, syntax)	▪ Uses all cueing systems to get meaning ▪ Is able to read more demanding texts, including children's novels ▪ Approaches familiar texts with confidence but still needs support with unfamiliar materials	

Descriptors of Reading Development

Pre-conventional	Emergent
Knowledge	
The child: ▪ Knows writing is something adults do ▪ Knows books contain stories ▪ Thinks the pictures tell the story (pictures rather than text govern reading attempts) ▪ Knows that books are sources of information and environment ▪ Knows books have a front and back	The child: ▪ Knows language can be recorded and revisited ▪ Understand that text as well as the illustrations carry the story ▪ Recognizes book language and sometimes uses this in speech, writing, or play ▪ Understands the importance of background knowledge and uses this to get meaning ▪ Is aware of some print conventions, especially those relevant to directionality, capital letters, and periods.

Descriptors of Reading Development

Early	Fluent	Expanding
Knowledge		
The child: ▪ Understands the importance of self-improving system in developing oneself as a reader ▪ Understands how real and imaginary experiences influence the meaning gained	The child: ▪ Knows how to use books to get information ▪ Knows how to use the library	
▪ Knows print has a fixed meaning ▪ Understands how much attention needs to be given to text to confirm predictions	▪ Knows to focus on details of print only when meaning is lost ▪ Understands taking risks and making approximations are an essential part of reading	▪ Is aware of a variety of genres(story, poem, play, report) and can identify elements ▪ Understands authors and illustrators have individual voices and styles ▪ Is able to determine how authors use text and supportive illustrations to create the message
▪ Understands significance of main conventions of print ▪ Shows increasing knowledge of print conventions ▪ Knows print flows left to right ▪ Has a basic sight vocabulary of functional and personal words ▪ Increases sight vocabulary rapidly ▪ Is stopped by hard words ▪ Knows relationship between the commonest sounds and letters	▪ Has a reservoir of sight words for reading	▪ Has a greatly enlarged vocabulary

Descriptors of Writing Development

Pre-conventional	Emergent
Dispositions	
The child: ▪ Takes risks playing with letter or letter-like forms ▪ Is curious about letters and words	The child: ▪ Takes risks in attempting to represent "talk written down" ▪ Is interested in the names of some letters and how to represent specific speech sounds ▪ Writes mainly for self (egocentric) ▪
Skills	
Pragmatics The child: ▪ Combines drawing and writing ▪ The drawing conveys most of the meaning	*Pragmatics* The child: ▪ Combines drawing and writing ▪ Writing supports and is supported by the meaning depicted in the picture
Semantics The child: ▪ May not intend to convey message ▪ May ask "What does this say?" of own writing	*Semantics* The child: ▪ Can write a caption or label to accompany own drawing ▪ When reading own writing may read the gist rather than exact words

Descriptors of Writing Development

Early	Fluent	Expanding
Dispositions		
The child: ▪ Enjoys representing "talk written down" ▪ Enjoys sharing own writing with others ▪ Writes mainly for self or for the teacher	The child: ▪ Enjoys playing with words in writing ▪ Enjoys receiving feedback from teacher and peers about own writing ▪ Writes for a known audience (classmates)	The child: ▪ Enjoys playing with words and ideas in writing ▪ Values and seeks out feedback on writing ▪ Writes for a wider range of audiences
Skills		
Pragmatics The child: ▪ Combines drawing and writing ▪ Writing can stand alone to convey meaning ▪ Is beginning to write for different purposes	*Pragmatics* The child: ▪ Can convey meaning in writing without pictures ▪ Is able to write for an increasing range of purposes	*Pragmatics* The child: ▪ Can convey complex meanings through writing ▪ Writes for wide range of purposes (for enjoyment, to think/create ideas, to communicate purposefully with others, to reflect upon experience)
Semantics The child: ▪ Chooses own topics ▪ Writes connected ideas ▪ Can write a sentence and illustrate it ▪ Can "think aloud" on paper, jot notes, keep a journal ▪ Can write three or more sentences that make sense ▪ Sequences ideas logically ▪ Writes in journal on regular basis on personal topics ▪ is developing sense of beginning, middle, end	*Semantics* The child: ▪ Is conscious of own ability to choose writing topics ▪ Consistently writes stories of a full page or more ▪ Writes stories with two or more characters ▪ Writes confidently in the personal mode ▪ Uses writing as an aid to work through ideas ▪ Elaborates and supports idea with relevant details ▪ Gathers relevant ideas; writes in a smooth, connected way	*Semantics* The child: ▪ Confidently chooses own writing topics ▪ Writes easily understood text ▪ Writes fluently: ideas flow fluently, language is not restricted or stilted ▪ Writes in a more organized fashion (more sequential and sustained) ▪ Has a well-developed sense of story and of structure ▪ Writes a properly sequenced story with a convincing setting; includes details about characters

Descriptors of Writing Development

Pre-conventional	Emergent
Skills	
Semantics	*Semantics*
Syntax	*Syntax* The child: Writes single words, phrases, or short simple statements (single sentence caption)

Descriptors of Writing Development

Early	Fluent	Expanding
Skills		
Semantics The child: ▪ Writes stories with one character ▪ May be dissatisfied with some of own writing and show willingness to make some changes ▪ Is able to read own writing	*Semantics* The child: ▪ Writes sufficient relevant ideas to produce a complete and logical sequence ▪ Is beginning to select words to create a particular effect ▪ Is developing some ability to edit and proofread ▪ Begins to develop a "voice" as a writer	*Semantics* The child: ▪ Increases ability to write in more complex narrative and non-narrative forms ▪ Is developing the capacity to write in a poetic style ▪ Is accomplished in writing in the personal (expressive) mode ▪ Uses writing to explore ideas and concepts and to create new ideas ▪ Is increasingly able to manage extended texts ▪ Is able to edit and proofread effectively ▪ Produces writing that is unified, well organized, and elaborated ▪ Shows increasing development of a "voice" as a writer
Syntax The child: ▪ Writes a series of simple statements	*Syntax* The child: ▪ Uses a variety of sentence structures ▪ Uses varied sentence lengths ▪ Writes some sentences containing more than one thought	*Syntax* The child: ▪ Uses syntax in writing which is becoming more complete than that used in speech ▪ Arranges words and sentences deliberately to obtain an effect

Descriptors of Writing Development

Pre-conventional	Emergent
Skills	
Grapho-Phonics The child: ▪ Makes strings of marks – Letter-like forms – Letters ▪ Uses letters or letter-like forms to depict meaning ▪ Practices alphabet or letters ▪ Knows some words such as own name, Mom, Dad ▪ Places words and letters in random order ▪ Tries out basic elements of print symbols ▪ May show linearity and directionality ▪ May utilize specific number of characters ▪ Demonstrates no sound/symbol correspondence	*Grapho-Phonics* The child: ▪ Makes letters similar to conventional ▪ Matches some letters to sounds of speech ▪ Is beginning to include functional spellings in own writing ▪ Writes initial consonants in words ▪ May omit vowels ▪ Uses letter name as a sound cue ▪ May use one letter to represent a whole word ▪ May use one letter to represent each syllable ▪ Uses no spacing or non-conventional direction (left-right, top-bottom) ▪ May translate independently (JBNBO=Jack be nimble, JKBOK=Jack be quick, MGBKMTDA=My grandpa came today)

Descriptors of Writing Development

Early	Fluent	Expanding
Skills		
Grapho-Phonics The child: ▪ Develops increasing ability to apply knowledge of sound/symbol correspondences ▪ Begins to use vowel and consonant combinations in syllables ▪ Attempts to represent most consonant sounds (initial, medial, final) ▪ Spells an increasing number of words conventionally ▪ Confidently uses functional spelling where standard form is not known ▪ Shows evidence of awareness of use of upper and lower case letters and periods ▪ Usually translates independently (IT STRTED TO THDR=It started to thunder, WE WENT TO THE HOSPTL=We went to the hospital)	*Grapho-Phonics* The child: ▪ Is growing in ability to handle conventions of writing (punctuation, spelling) ▪ Has internalized some conventions of adult writing (capitals, periods, question marks) ▪ Spells a considerable number of words conventionally ▪ Uses functional spelling as an interim measure while drafting but searches for standard form before final draft ▪ Uses classroom aids to assist or check spelling	*Grapho-Phonics* The child: ▪ Observes the conventions of written language ▪ Spells most words conventionally ▪ Uses classroom aids to assist or check spelling as appropriate ▪ Continually refines skills of punctuation and spelling

Descriptors of Writing Development

Pre-conventional	Emergent
Knowledge	
The child: ▪ Is aware of conventional print ▪ May not be aware that print "tells the story"	The child: ▪ Knows the names of some letters ▪ Is aware of some forms of writing (labels, captions, stories, letters) ▪ Understand writing as "talk written down"

Descriptors of Writing Development

Early	Fluent	Expanding
Knowledge		
The child: ▪ Has extensive knowledge of letter names ▪ Is growing in knowledge of sound/symbol correspondence ▪ Is gaining knowledge of some terms used with writing (letter, word, sentence) ▪ Shows beginning awareness of the needs of an audience ▪ Is aware of more forms of writing (captions, stories, notes, letters, poems, lists)	The child: ▪ Has understanding of most grapho-phonic patterns ▪ Has considerable knowledge of writing terms (names of punctuation marks, paragraph) ▪ Shows increasing awareness of the needs of an audience ▪ Is aware of various forms of writing ▪ Shows beginning awareness of the differences between speaking and writing	The child: ▪ Has a wide understanding of grapho-phonic patterns ▪ Has extensive knowledge of the language of writing (drafting, editing, description) ▪ Knows the needs of and is responsive to the reader (appearance of writing, letter formation, layout) ▪ Is aware of a range of forms and genres (tall tales, fables, myths, reports, experiments) ▪ Shows increasing awareness of differentiation between speaking and writing

Descriptors of Viewing Development

Early Primary	Late Primary
Dispositions	
The child: ▪ Shows interest in a variety of forms of visual representation ▪ Values viewing for enjoyment	The child: ▪ Shows interest in increasing variety of forms of visual representation ▪ Values viewing as a tool for learning as well as for enjoyment
Skills	
The child: ▪ Builds upon viewing skills developed during the pre-school years ▪ Views for a variety of purposes (for enjoyment, to follow directions) ▪ Is moving from viewing for general rather than specific detail to viewing for more detail for longer periods of time ▪ Focuses on whole rather than part (detail) when viewing ▪ Is able to interpret/understand some visual representations confidently ▪ Is becoming more able to view effectively a variety of forms of visual representation	The child: ▪ Refines the development of previous viewing skills and expands repertoire ▪ Views for an increasing range of purposes (to gain information, to project into another's experience) ▪ Becoming more sensitive to detail in content/form ▪ Shows increasing ability to extract pertinent ideas, focus on the detail (parts) and keep whole in mind; to reflect and predict; draw inferences ▪ Approaches familiar forms of visual representation with confidence, but still needs support with new, unfamiliar, or more complex forms ▪ Is beginning to draw inferences from visual representation independently ▪ Is learning to compare and find relationships among a variety of forms of visual representation
Knowledge	
The child: ▪ Understands visual representations convey ideas and information; ideas and information may be gained through viewing ▪ Recognizes some form of visual representation in context (environmental signs)	The child: ▪ Knows how to use a variety of forms of visual representation to get ideas and information ▪ Is aware of an increasing variety of forms of visual representation

Descriptors of Visual Representation Development

Early Primary	Later Primary
Skills	
The child: ▪ Manipulates and experiences with a variety of forms of visual representation ▪ Approximates conventional forms of visual representation ▪ Is able to represent ideas visually in a variety of forms ▪ Is able to represent ideas with confidence when representations involve overt physical action and/or concrete materials, (using concrete manipulatives in mathematics)	The child: ▪ Manipulates and experiments with an increasing variety of forms of visual representation ▪ Is able to use forms of visual representation in more conventional ways, when appropriate ▪ Is able to represent ideas visually in more complex and sophisticated ways ▪ Is increasingly able to represent ideas in abstract-symbolic forms (number sentences in mathematics)
Knowledge	
The child: ▪ Is aware of a variety of forms of visual representation ▪ Knows the names of some forms of visual representation (a drawing, a picture, a model)	The child: ▪ Has understanding of a range of forms of visual representation across the curriculum ▪ Knows the names of many forms of visual representation (map, chart, diagram)

Connecting Widely-Held Expectations with Language Arts Standards and Benchmarks

This work is the result of several rural school districts working to align the Primary Program's Widely-Held Expectations to the McREL Compendium standards and benchmarks.

Kendall, J. S. & Marzano, R. J. (1997). *Content knowledge: A compendium of standards and benchmarks for K–12 education (2nd ed.).* Alexandria, VA: Association for the Supervision and Curriculum Development and Mid-continent Regional Educational Laboratory, Inc.

1. Demonstrates competence in the general skills and strategies of the written process

B-3	3–5	5–7	7–9	9-11	11–13
• Use scribbles, lines, and circles for expression	• Combine drawing and writing but drawing conveys most of the meaning	• Combine drawing and writing to convey ideas • Demonstrate increasing knowledge of letter names, common letter-sound associations--especially consonants and some forms of writing (labels, stories, letters)	• May combine drawing and writing but writing can stand alone to convey meaning		
• May try to grasp writing tools with whole hand • May draw randomly and look away while drawing or making marks on paper or board • May begin to make scribbles for pleasure of seeing the results of their actions	• May not intend to convey a particular message and may ask "What does this say?" of own writing • Play at writing and may produce: - Scribble writing (imitative cursive writing) - Random symbols (strings of forms that resemble letters) - Random letters (strings of letters) - Single letters that represent a sound (s for "snake") or a syllable (dd for "daddy")				

1. Demonstrates competence in the general skills and strategies of the written process—continued

B-3	3–5	5–7	7–9	9-11	11–13
	• View writing as something that people do and like to play at writing; are curious about letters and words	• Are interested in the names of letters and how to represent specific speech sounds; write mainly for personal interest • Writing usually related to their own experiences	• May produce a series of connected ideas that make sense, stories with two or more characters, stories of a full page or more, and reports, letters, poems, and other forms of writing	• Understand writing as "ideas written down" • May produce stories with two or more characters, topics of ideas supported by relevant details, a series of ideas connected smoothly and logically, a variety of sentence structures and varied sentence length, and more complex reports, letters, poems and so on	• Show increasing awareness of differences between speaking and writing • May produce writing that: Contains more complex narratives with complex settings and characters
			• Enjoy writing and sharing own writing with others • Begin to develop a sense of audience	• Enjoy receiving feedback from others about own writing • Show an increasing awareness of audience	• Value and seek out feedback on own writing and write for a wider audience
				• Are able to write for an increasing number of purposes	• Write for a broad range of purposes and can convey increasingly complex and abstract ideas through writing
					• Enjoy playing with words and ideas and can write from different points of view

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2. Demonstrates competence in the stylistic and rhetorical aspects of writing

B-3	3–5	5–7	7–9	9-11	11–13
• Use scribbles, lines, and circles for expression	• View writing as something that people do and like to play at writing; are curious about letters and words • Combine drawing and writing but drawing conveys most of the meaning				
	• Combine drawing and writing but drawing conveys most of the meaning				
	• May produce some conventional words (own name, mom, dad) as well as play writing	• May produce: - Writing usually related to their own experiences - A label or caption to accompany a drawing - Single words or phrases - Short, simple sentences - A series of simple sentences - Simple stories with one or two characters	• May combine drawing and writing, but writing can stand alone to convey meaning • May produce a series of connected ideas that make sense, stories with two or more characters, stories of a full page or more, and reports, letters, poems, and other forms of writing	• Can convey more complex ideas through writing • May produce a series of ideas connected smoothly and logically, a variety of sentence structures and varied sentence length, letters, poems and so on	• May produce writing that is easily understood, fluent, logically organized, unified, and elaborated

3. Uses grammatical and mechanical conventions in written compositions

B-3	3–5	5–7	7–9	9-11	11–13
	• View writing as something that people do and like to play at writing; are curious about letters and words • May not intend to convey a particular message and may ask "What does this say?" of own writing • Play at writing and may produce: - Scribble writing (imitative cursive writing) - Random symbols (strings of forms that resemble letters) - Random letters (strings of letters)				
	• Play at writing and may produce: - single letters that represent a sound (s for "snake") or a syllable (dd for "daddy")	• Are interested in the names of letters and how to represent specific speech sounds; write mainly for personal interest	• Demonstrate increasing knowledge of letter-sound relationships, including vowels, [continued]	• Demonstrate increasing knowledge of most spelling patterns, terms used with writing [continued]	• Demonstrate increasing knowledge of spelling patterns, terms used with writing, a wider range of forms and parts of speech, [continued]
	• May produce some conventional words (own name, mom, dad) as well as play writing	• May produce: - Single words or phrases - Short, simple sentences - A series of simple sentences	common spelling patterns, terms used with writing (letter, word, sentence); and forms of writing (poem, report)	(paragraph, punctuation), and a variety of forms of writing (fables, fairy tales)	but are not yet able to grasp many of the formal aspects of grammar
		• Demonstrate increasing knowledge of letter names, common letter-sound associations--especially consonants and some forms of writing (labels, stories, letters)			

3. Uses grammatical and mechanical conventions in written compositions—continued

B-3	3–5	5–7	7–9	9-11	11–13
		• Produce increasingly conventional writing by: - Writing in capitals and moving toward the use of lower case letters - Spelling with consonants and moving toward phonetic spellings that include vowels - Spelling some common words conventionally - Showing some sense of directionality but may reverse some letters (b and d) or right to left at times - Starting to use some punctuation marks (periods)	• Produce increasingly conventional writing by: - Spelling an increasing number of words - Using upper and lower case letters and spacing between words - Conventionally using functional spelling when drafting - Understanding directionality (left-to-right, top-to-bottom of a page, front-to-back in a book) but still may reverse letters (b and d) - Developing the ability to punctuate (periods, question marks)	• Spell considerable number of words conventionally • Use functional spelling while drafting, but search for standard spelling before the final draft • Use many punctuation marks conventionally (periods, question marks), but may still confuse others (commas, quotation marks)	• Produce increasingly conventional writing by using standard spelling and most punctuation marks (but still may confuse marks such as commas and semi-colons)
					• May produce writing that: - Is more complex in grammatical structure than speech - Has more complex non-narrative forms

4. Effectively gathers and uses information for research purposes

B-3	3–5	5–7	7–9	9-11	11–13
			• Are developing knowledge of a variety of forms that communicate ideas (graphs, maps, charts)	• Writes on topics/ideas supported by relevant details, and may create more complex reports	• Has more complex non-narrative forms

5. Demonstrates competence in general skills and strategies of the reading process

B-3	3–5	5–7	7–9	9-11	11–13
• Are beginning to develop an understanding of language and how it works (imitating sounds, saying words, putting words together) • Are learning to name objects and may use the same word for two or more objects (all vehicles called "cars") • Are increasingly able to identify familiar faces, toys, places, and activities					
• May be interested in grouping objects (putting all the large animals to bed and leaving the small ones to play)					
			• See themselves as readers	• Are able to read independently • May read longer and more demanding texts	• Are able to read independently

5. Demonstrates competence in general skills and strategies of the reading process-continued

B-3	3–5	5–7	7–9	9-11	11–13
• "Read" pictures for meaning; begin to recognize that writing has meaning (writing is intended for communication)	• Are curious about print in own environment--names of letters, signs, labels, and logos • Play at reading: "read pictures" rather than print • Begin with naming and commenting on the pictures, then telling stories from the pictures • "Read" print in own familiar environment (restaurant signs, familiar places, traffic signs) • Know that print is a source of information and enjoyment	• begin to develop a basic vocabulary of functional and personal words recognized on sight • Are increasingly able to deal with the parts of print (letters and words) • Develop knowledge of common letter-sound relationships • Begin to develop an ability to try reading print, including ways to figure out unknown words (common letter sound associations, picture clues)	• Are interested in print (spelling, word meanings) • Make greater use of context to predict and confirm meaning of words • Begin to self-correct own miscues ("errors") • Are rapidly increasing knowledge of words recognized on sight • Developing ability to read silently • Are increasingly able to read orally with fluency and expression • Develop increasing knowledge of letter-sound relationships and common spelling patterns	• Self-correct own miscues confidently and independently	
	• Focus on the whole story rather than on individual words • Rely on an adult or older child to read text • Begin to develop a "sense of story"	• Understand that the print "tells the story" • continue to develop a "sense of story"	• Show ability to make inferences (understand content, draw conclusion) • Have a "sense of story" and can identify the parts		
	• Begin to develop knowledge of some conventions of print, front-to-back directionality of books	• Increase awareness of print conventions (top-to-bottom and left-to-right directionality, punctuation)	• Understand the main conventions of print (directionality, punctuation)	• Understand the main conventions of print (directionality, capitalization, punctuation) and are developing an increasing knowledge of standard spelling)	• Understand the main conventions of print (directionality, capitalization, punctuation, and spelling)

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5. Demonstrates competence in general skills and strategies of the reading process—continued

B-3	3–5	5–7	7–9	9-11	11–13
			• See themselves as readers • Develop increasing independence in reading	• Are increasing the length of time concentrating on reading • Are increasing silent reading rate (which may exceed the rate of speech)	• Increase reading vocabulary, silent reading rate, length of time for concentration
			• Read for a variety of purposes	• Are developing an ability to adjust reading rate to suit purpose (scanning to locate information)	• Ability to adjust rate of reading to suit purpose (skim, scan, select, study)

6. Demonstrates competence in the general skills and strategies for reading a variety of literary texts

B-3	3–5	5–7	7–9	9-11	11–13
	• Begin with naming and commenting on the pictures, then telling stories from the pictures • "Read" print in own familiar environment (restaurant signs, familiar places, traffic signs) • Know that print is a source of information and enjoyment	• Enjoy reading favorite books • Choose short books with simple stories and illustrations	• Develop increasing independence in reading	• Are increasingly able to set own purposes for reading (read for interest, by topic or favorite author)	• Read for an increasing variety of purposes and choose from a wide range of reading material
		• Are increasingly able to recognize environmental print away from its familiar context			

6. Demonstrates competence in the general skills and strategies for reading a variety of literary texts—continued

B-3	3–5	5–7	7–9	9-11	11–13
		• Understand that the print "tells the story" • Continue to develop a "sense of story"	• Make greater use of context to predict and confirm meaning of words • have a "sense of story" and can identify the parts • Are increasingly able to focus on details keeping main ideas in mind • Show ability to make inferences (understand intent, draw conclusions)	• Are aware of different genres of reading materials and can identify some elements (the moral of a fable) • Are increasingly able to deal with detail in content and form, while keeping main ideas in mind • Show increasing ability to make inferences and to read critically	• Increase knowledge of and ability to identify and discuss the elements (characters, plot) of a variety of reading materials • Are increasingly able to understand and discuss aspects of literature such as theme, conflict, and author's style • Are able to deal with detail in content and form while keeping main ideas in mind • Are increasing in ability to read critically and to detect inconsistencies in argument
			• Show interest in topics, characters, and events	• May broaden their interests in fiction	• Continue to broaden their interests in fiction and non-fiction
			• Are beginning to read novels; use books to find information		• Are increasing in the ability to persist with longer and more complex texts (more difficult novels, school textbooks)
					• Understand that different readers may interpret the same material in different ways

7. Demonstrates competence in the general skills and strategies for reading a variety of informational texts

B-3	3–5	5–7	7–9	9-11	11–13
	• "Read" print in own familiar environment (restaurant signs, familiar places, traffic signs)	• Are increasingly able to recognize environmental print away from its familiar context			
		• Understand that the print "tells the story"	• Are increasingly able to focus on details keeping main ideas in mind • Show ability to make inferences (understand intent, draw conclusions)	• Are increasingly able to deal with detail in content and form while keeping main ideas in mind • Shows increasing ability to make inferences and to read critically	• Are able to deal with detail in content and form while keeping main ideas in mind • Are increasing in ability to read critically and to detect inconsistencies in argument
					• Are increasing in the ability to persist with longer and more complex texts (more difficult novels, school textbooks)
			• Read for a variety of purposes • Books to find information	• May broaden their interests in non-fiction	• Continue to broaden their interests in fiction and non-fiction
			• Are developing knowledge of a variety of forms that communicate ideas (graphs, maps, charts)	• Begin to try reading material in various forms (graph, maps)	• Increase ability to read various forms of text (graphs, maps, charts)
				• Are able to organize information from reading	

Language Arts Appendix

10 Research-based Principles

Continuum of Development in Reading and Writing

Synchrony of Reading, Writing, and Spelling

Choosing Books

Read Aloud Now!

A child is a person who is going to carry on what you have started. He is going to sit where you are sitting, and when you are gone, attend to those things which you think are important. You may adopt all the policies you please, but how they are carried out depends on him. He will assume control of your cities, states, and nations. He is going to take over your churches, schools, universities, and corporations. The fate of humanity is in his hands (Abraham Lincoln).

CIERA 10 Principles

Improving the Reading Achievement of America's Children

10 Research-Based Principles

1. **Home language and literacy experiences** that lead to the development of key print concepts are plentiful among children who enter school prepared to learn to read. Joint book reading with family members helps children develop a wide range of knowledge that supports them in school-based reading. Once students are in school, parental help in the form of modeling good reading habits and monitoring homework and television viewing is associated with gains in student achievement. Programs that assist families in initiating and sustaining these sorts of activities show positive benefits for children's reading achievement.

2. **Preschool programs** are particularly beneficial for children who do not experience informal learning opportunities in their homes. These preschool experiences include opportunities to listen to and examine books, say nursery rhymes, write messages, and see and talk about print. Such preschool experiences lead to improved reading achievement in the school years, with some effects proving durable through grade 3.

3. **Skills that predict later reading success** can be promoted through a variety of classroom language and meaningful reading and writing events in kindergarten and grade 1. The two most powerful of these predictors are letter-name knowledge and phonemic awareness (the conscious awareness of the sounds in *spoken* words). Instruction that promotes phonemic awareness engages children in hearing and blending sounds. Activities that promote this attention to sounds can be motivating and playful for young children, including oral renditions of rhymes, poems, and songs, as well as writing their own journals and messages. Such instruction has demonstrated positive effects on primary-grade reading achievement, especially when it is coupled with letter-sound instruction.

4. **Primary-level instruction** that supports successful reading acquisition is consistent, well-designed, and focused. Teachers lead lessons where children receive systematic word recognition instruction on common, consistent letter-sound relationships and important but often unpredictable high-frequency words, such as *the* and *what*. Teachers ensure that children become adept at monitoring the accuracy of their reading as well their understanding of texts through instruction in strategies such as predicting, inferencing, clarifying misunderstandings, and summarizing. Instructional activities that promote growth in word recognition and comprehension include repeated reading of text, guided reading and writing, strategy lessons, reading aloud with feedback, and conversations about texts children have read.

5. **Primary-level classroom environments** in successful schools provide opportunities for students to apply what they have learned in teacher-guided instruction to everyday reading and writing. In these classrooms, teachers read books aloud and hold follow-up discussions, children read independently every day, and children write stories and keep journals. These events are monitored frequently by teachers, ensuring that time is well spent and that children receive feedback on their efforts. Teachers design these events carefully, using information from ongoing assessment of children's strengths and needs as the primary basis for new activities.

6. **Cultural and linguistic diversity** among America's children reflects the variations within the communities and homes in which they live and is manifest in differences in their dispositions toward and knowledge about topics, language, and literacy. Effective instruction includes assessment, integration, and extension of relevant background knowledge and the use of texts that recognize these diverse backgrounds. The language of children's homes is especially critical for schools to build on when children are learning to speak, listen to, write, and read English. There is considerable evidence that the linguistic and orthographic knowledge students acquire in speaking and reading their first language predicts and transfers to learning to read a second language. When teachers capitalize on the advantages of bilingualism or biliteracy, second language reading acquisition is significantly enhanced.

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7. **Children who are identified as having reading disabilities** benefit from systematic instruction, but not at the cost of opportunities to engage in meaningful reading and writing. These children profit from the same sort of well-balanced instructional programs that benefit all children who are learning to read and write. Programs are characterized by intensive one-on-one or small-group instruction, attention to both comprehension and word recognition processes, thoroughly individualized assessment and instructional planning, and extensive experiences with an array of texts.
8. **Proficient reading third grade and above** is sustained and enhanced by programs that adhere to four fundamental features: (1) deep and wide opportunities to read, (2) the acquisition of new knowledge and vocabulary, partially through wide reading but also through explicit attention to acquiring networks of new concepts through instruction, (3) an emphasis on the influence that the kinds of text (e.g., stories versus essays) and the ways writers organize particular texts has on understanding, and (4) explicit attention to assisting students in reasoning about text.
9. **Professional opportunities** to improve reading achievement are prominent in successful schools and programs. These opportunities allow teachers and administrators to analyze instruction, assessment, and achievement, to set goals for improvement, to learn about effective practices, and to participate in on-going communities in which participants deliberately try to understand but successes and persistent problems.
10. **Entire school staffs,** not just first-grade teachers, are involved in bringing children to high levels of achievement. In successful schools, goals for reading achievement are clearly stated, high expectations for children's attainment of these goals are shared with all participants, instructional means for attaining these goals are articulated, and shared assessments are used to monitor children's progress. Instructional programs in successful schools may have many different programs extend into the home by involving parents in their children's reading and homework. Community partnerships, including volunteer tutoring programs, are common in such schools.

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(CIERA) (2000). *Improving the reading achievement of America's children: 10 research-based principles.* Online. http://www.ciera.org/ciera/information/principles/principles.html.

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Continuum of Children's Development in Early Reading and Writing

Note: this list is intended to be illustrative, not exhaustive. Children at any grade level will function at a variety of phases along the reading/writing continuum.

Phase 1: Awareness and exploration (goals for preschool)

Children explore their environment and build the foundations for learning to read and write.

Children can

- Enjoy listening to and discussing storybooks
- Understand that print carries a message
- Engage in reading and writing attempts
- Identify labels and signs in their environment
- Participate in rhyming games
- Identify some letters and make some letter-sound matches
- Use known letters or approximations of letters to represent written language (especially meaningful words like their name and phrases such as "I love you")

What teachers do

- Share books with children, including Big Books, and model reading behaviors
- Talk about letters by name and sounds
- Establish a literacy-rich environment
- Reread favorite stories
- Engage children in language games
- Promote literacy-related play activities
- Encourage children to experiment with writing

What parents and family members can do

- Talk with children, engage them in conversation, give names of things, show interest in what a child says
- Read and reread stories with predictable text to children
- Encourage children to recount experiences and describe ideas and events that are important to them
- Visit the library regularly
- Provide opportunities for children to draw and print, using markers, crayons, and pencils

Phase 2: Experimental reading and writing (goals for kindergarten)

Children develop basic concepts of print and begin to engage in and experiment with reading and writing.

Kindergartners can

- Enjoy being read to and themselves retell simple narrative stories or informational texts
- Use descriptive language to explain and explore
- Recognize letters and letter-sound matches
- Show familiarity with rhyming and beginning sounds
- Understand left-to-right and top-to-bottom orientation and familiar concepts of print
- Match spoken words with written ones
- Begin to write letters of the alphabet and some high-frequency words

What teachers do

- Encourage children to talk about reading and writing experiences
- Provide many opportunities for children to explore and identify sound-symbol relationships in meaningful contexts
- Help children to segment spoken words into individual sounds and blend the sounds into whole words (for example, by slowly writing a word and saying its sound)
- Frequently read interesting and conceptually rich stories to children
- Provide daily opportunities for children to write
- Help children build a sight vocabulary
- Create a literacy-rich environment for children to engage independently in reading and writing

What parents and family members can do

- Daily read and reread narrative and informational stories to children
- Encourage children's attempts at reading and writing
- Allow children to participate in activities that involve writing and reading (for example, cooking, making grocery lists)
- Play games that involve specific directions (such as "Simon Says")
- Have conversations with children during mealtimes and throughout the day

Phase 3: Early reading and writing (goals for first grade)

Children begin to read simple stories and can write about a topic that is meaningful to them.

First-graders can

- Read and retell familiar stories
- Use strategies (rereading, predicting, questioning, contextualizing) when comprehension breaks down
- Use reading and writing for various purposes on their own initiative
- Orally read with reasonable fluency
- Use letter-sound associations, word parts, and context to identify new words
- Identify an increasing number of words by sight
- Sound out and represent all substantial sound in spelling a word
- Write about topics that are personally meaningful
- Attempt to use some punctuation and capitalization

What teachers do

- Support the development of vocabulary by reading daily to the children, transcribing their language, and selecting materials that expand children's knowledge and language development
- Model strategies and provide practice for identifying unknown words

- Give children opportunities for independent reading and writing practice
- Read, write, and discuss a range of different text types (problems, informational books)
- Introduce new words and teach strategies for learning to spell new words
- Demonstrate and model strategies to use when comprehension breaks down
- Help children build lists of commonly used words from their writing and reading

What parents and family members can do

- Talk about favorite storybooks
- Read to children and encourage them to read to you
- Suggest that children write to friends and relatives
- Bring to a parent-teacher conference evidence of what your child can do in writing and reading
- Encourage children to share what they have learned about their writing and reading

Phase 4: Transitional reading and writing (goals for second grade)

Children begin to read more fluently and write various text forms using simple and more complex sentences.

Second-graders can

- Read with greater fluency
- Use strategies more efficiently (rereading, questioning, and so on) when comprehension breaks down
- Use word identification strategies with greater facility to unlock unknown words
- Identify an increasing number of words by sight
- Write about a range of topics to suit different audiences
- Use common letter patterns and critical features to spell words
- Punctuate simple sentences correctly and proofread their own work
- Spend time reading daily and use reading to research topics

What teachers do

- Create a climate that fosters analytic, evaluative, and reflective thinking
- Teach children to write in multiple forms (stories, information, poems)
- Ensure that children read a range of texts for a variety of purposes
- Teach revising, editing, and proofreading skills
- Teach strategies for spelling new and difficult words
- Model enjoyment of reading

What parents and family members can do

- Continue to read to children and encourage them to read to you
- Engage children in activities that require reading and writing
- Become involved in school activities
- Show children your interest in their learning by displaying their written word
- Visit the library regularly
- Support your child's specific hoppy or interest with reading materials and references

Phase 5: Independent and productive reading and writing (goals for third grade)

Children continue to extend and refine their reading and writing to suit varying purposes and audiences.

Third-graders can

- Read fluently and enjoy reading
- Use a range of strategies when drawing meaning from the text
- Use word identification strategies appropriately and automatically when encountering unknown words
- Recognize and discuss elements of different text structures
- Make critical connections between texts
- Write expressively in many different forms (stories, poems, reports)
- Use a rich variety of vocabulary and sentences appropriate to text forms
- Revise and edit their own writing during and after composing
- Spell words correctly in final writing drafts

What teachers do

- Provide opportunities daily for children to read, examine, and critically evaluate narrative and expository texts
- Continue to create a climate that fosters critical reading and personal response
- Teach children to examine ideas in texts
- Encourage children to use writing as a tool for thinking and learning
- Extend children's knowledge of the correct use of writing conventions
- Emphasize the importance of correct spelling in finished written products
- Create a climate that engages all children as a community of literacy learners

What parents and family members can do

- Continue to support children's learning and interest by visiting the library and bookstores with them
- Find ways to highlight children's progress in reading and writing
- Stay in regular contact with your child's teachers about activities and progress in reading and writing
- Encourage children to use and enjoy print for many purposes (such as recipes, directions, games, and sports)
- Build a love of language in all its forms and engage children in conversation

In National Association for the Education of Young Children, 1998.

Synchrony of Reading, Writing and Spelling Development

(Adapted from Bear, et al. 2000; Butler, Turbill, & Cambourne 1998)

READERS	WRITERS	SPELLERS
Ages 1–7		
Pre-Emergent ▪ Pretend reader ▪ Tries to read but does not yet realize that he must process the print	**Pre-Emergent** ▪ Pretend writes ▪ Knows writing conveys meaning ▪ Tries to write like others, not yet sure what letters are	**Pre-literate** ▪ Marks on page
Emergent ▪ Knows concept of word ▪ Can track one to one ▪ Uses picture and initial letter clues in patterned books	**Emergent** ▪ Produces string writing ▪ Uses letters, but does not leave spaces between words ▪ Knows writing conveys meaning, but often cannot read own writing	**Pre-literate** ▪ Symbols or known letters randomly used in pretend writing
Ages 5–9		
Early (Beginning) ▪ Know some sight words ▪ Reading is unexpressive ▪ Rereads and uses initial letter and pictures to self-correct	**Early (Beginning)** ▪ Writes simple labels, captions and some oral language patterns ▪ Some spaces between words ▪ Sometimes can read own writing, but others cannot	**Early Letter Name** ▪ Syllabic spelling ▪ Uses several alphabetic letters ▪ Mostly uses letter names to spell
Early (Middle) ▪ Finger points ▪ Has basic of self-correction and word solving strategies ▪ Complex words still need picture support	**Early (Middle)** ▪ Enjoys writing comments and observations in journals ▪ Can read own writing	**Middle Letter Name** ▪ Has left to right ▪ Uses most letters ▪ Knows some clear letter sound correspondences ▪ There are vowels in most words
Early (End) ▪ Reading is becoming fluent and expressive ▪ Finger point when word or meaning solving ▪ Has some of self-correction and word solving strategies	**Early (End)** ▪ Writes simple stories and information pieces ▪ Slow deliberate writer, rereads and tracks aloud ▪ Likes to write for familiar audiences for variety purposes ▪ Others can read writing	**Late Letter Name** ▪ Uses most beginning and ending consonants ▪ Uses short vowels ▪ Knows most clear letter sound correspondences ▪ Knows some blends and digraphs ▪ Uses only sound patterns

Synchrony of Reading, Writing and Spelling Development (Continued)
(Adapted from Bear, et al. 2000; Butler, Turbill, & Cambourne 1998)

Readers	Writers	Spellers
Ages 6–12		
Fluent ▪ Reading is fluent and expressive ▪ Has a variety of self-correction and word solving strategies	**Fluent** Explores many genres ▪ Developing a sense of audience and considers them ▪ Begins to revise and edit own work with help ▪ Can detect some of own spelling errors ▪ Can take a piece through the writing process to publication	**Within Word Pattern** ▪ Starts to use both visual and sound patterns ▪ Getting r-controlled vowels in on syllable words ▪ Begins using long vowel patterns ▪ Gets common long vowels in one syllable words ▪ Gets most long vowels in one syllable words ▪ May know some inflectional endings and common suffixes
Ages 10+		
Developing ▪ Reads orally with sense of audience ▪ Silent rate is faster than oral rate ▪ Reads for a variety of purposes ▪ Reads like a writer—notices styles, voice, word choice, spellings, etc.	**Developing** ▪ Begins using planning strategies—visual, outline, brainstorm ▪ Exploring different styles and genre for different purposes	**Syllable juncture** ▪ Short and long vowels stable in one syllable words ▪ Experiments with joining syllables-doubling letters, changing /y/ to /i/ ▪ Beginning to understand the connection between meaning and spelling e.g. /ed/ conveys past tense ▪ Learns homophones and homonyms
Extending	**Extending** ▪ Can research, plan, draft, revise, edit, and proof-read own work ▪ Developing a sense of audience beyond own family and friends ▪ Knows characteristics of common genre: stories, reports, letters, instructions ▪ Knows writing is a process and requires revision, time, and persistence	**Derivational Constancy** ▪ Uses common affixes and root words and concept of derivations ▪ Begins to explore meaning basis and links to spelling ▪ Can spell many multi-syllable words ▪ Learns low frequency vowel patterns, mainly from meaning ▪ Explores when to use different spellings for the same ending, e.g. /tion/ and /sion/

Things to Remember When Choosing Books

Infants

- Look for simple books with uncluttered pictures that are easy to "read."
- Ideal subjects are those that reflect objects in a baby's world clearly and realistically. First books should be made of cloth, soft, non-toxic, and washable.
- Look for board books that are firmly stitched or glued.

Toddlers

- Look for clear uncluttered pictures that are easy to "read."
- Little stories that reflect the child's own world are most appropriate for now.
- Books for independent reading should be of sturdy materials since turning pages is still difficult.
- Choose books you won't mind reading and rereading.
- A supply of magazines for browsing is fascinating.

Three and Four Year Olds

- Is this right for these particular children?
- Will they understand the theme?
- Will it scare or comfort them?
- Does it relate to their interests?
- Does it answer some of their questions?
- Is the language as fresh as possible?
- Are the pictures interesting, well done, and enticing enough to pore over?
- Will I enjoy reading it many times?
- Do I approve of its messages, hidden or overt?

Five Year Olds

- Introduce a variety of books, from fantasy to fact. Reread old favorites and add new one to your storytime.
- Encourage children to tell original stories or retell old favorites.
- Provide puppets, paper, and crayons to extend the verbal experience to a visual one.
- Introduce some classic folktales, but steer clear of overly complex or gory ones.
- Borrow books from the library and build a small library of your own, special favorite they can read and reread.
- Draw attention to printed words, but don't push for learning to read—loving books and stories is where reading begins.

Six and Seven Year Olds

- Offer a variety of books with more complex plots and characters.
- Take your cues from their interests and expand on those interests.
- Provide plenty of easy-to-read books.
- Continue reading aloud, especially books that may be a little difficult for sixes and sevens to read independently.
- Involve children in selecting books to borrow from the library and/or purchase for your library.

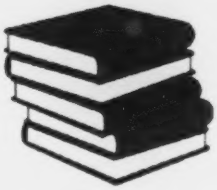
Eight and Nine Year Olds

- Books at this stage should be "desired" not "required".
- Give kids options to exercise their own taste, even "poor tastes".
- Look for read-aloud stories with three-dimensional characters and complex plots.
- Select stories you enjoy so that you convey that joy.
- If they find an author they like, encourage them to look for other books by that author.
- Choose books from various genres; if they seem to favor fantasy or mysteries or fairy tales, build on their enjoyment.
- Avoid pushing them to read at the next level independently. Longer and harder is not necessarily better.

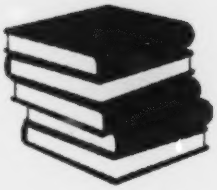
Ten and Twelve Year Olds

- Children this age need books that explore morals and values.
- Nonfiction can be as important as fiction in expanding horizons and interests.
- Fantasy and legend speak to creativity and problem-solving.
- Reading aloud as a family activity is still a sound idea.
- Discuss books.

Adapted from: Oppenheim, Joanne, (1986) *Choosing Books for Kids*, New York, Bank Street College.



Read Aloud Now!



Why read aloud?

- It's fun and enjoyable for everyone…it helps create a special bond.
- Children learn to read as they listen and look at books.
- Models reading for a variety of purposes

How to read aloud!

- Share books you like.
- Let your voice get soft and loud. Change the pace of your reading…slow or fast.
- Turn off the television, radio or stereo—read a book
- Let your child have fun with the book. Encourage the child to point out pictures, ask questions or repeat words.

Where to start?

- Start at the library. Your library has it all—books, recording, videos.
- Ask your child's teacher for a list of books
- No matter what your interest, ask at the library.
- Introduce simple pictures and storybooks as the baby grows. Shapes, colors, and sounds will delight.
- Visit the library often. Let the children get their own library cards and select their own books.
- Keep plenty of reading materials around the house. Put children's books on low shelves.
- Give books as gifts. Let children know you think books are special

Tips for reading aloud

- Read to your baby: rhymes like "Mary Had a Little Lamb," a birthday card, the cereal box or a newspaper story you are reading. It's the sounds that are important.
- Make a special time for reading aloud: after dinner, before bed…anytime, anywhere, anyplace.
- Try lots of books. There's a book for everyone!
- Read more about people, places, and things you see on television.
- Have older children read aloud while you do household chores.
- Let children see you read. Talk about what you read.

Adapted from ALA Video/Library Video Network, *Read Aloud Now*.

Mathematics in the Primary Program

Common Understandings

Children of different ages understand mathematical concepts in different ways. Even children of similar ages in the same classroom may be at different developmental levels. By watching children as they play with objects and interact with each other, teachers can recognize different stages of development in mathematical concepts and can plan appropriately.

Babies do not realize that a toy that falls out of the crib still exists when they cannot see it. If their rattle is out of sight, it is also "out of mind." But by the age of one year, most infants have developed a sense of object permanence (Piaget, 1954). They know their rattle is somewhere, even when they are not playing with it. This understanding is an early building block of mathematical concepts children will develop later on.

> *We have seen that children learn the real basics of thinking about mathematics through personal experience and playful activities. With appropriate learning experiences from birth through the early elementary years, children will develop a lifelong interest in using mathematics.*
>
> McCracken, 1987

The young child's thinking is not always consistent or logical from an adult's point of view. Many two-year-olds have begun learning their first counting words, and they may know that three is more than one or two, but it will be a while before they understand larger numbers and ideas such as eight is more than seven and less than nine. Preschoolers' understandings of number, space, time, size, and other concepts are ruled by perception and depend upon how something looks to them. They believe that ten crackers spread out in a line is more than ten crackers placed close together. Young children often think that the spread-out row has "more to eat because it looks bigger." Between six and eight years, many children begin to reason that ten things are ten things, no matter how they are grouped or arranged in space. They have developed conservation of number; that is, they are able to separate number from length, and they tend not to confuse the two concepts (Piaget & Szeminska, 1952).

Preschoolers' understanding of math concepts grows as they have many opportunities to play with objects and learn. At first, a four-year-old might try to fit a little shoe on a big doll's foot and a big shoe on a little doll's foot. Older children know the big shoe has to go with the big doll and the little shoe with the little doll. But the preschooler's way of thinking is an important step in understanding what it means to measure and will be a foundation for future mathematical learning.

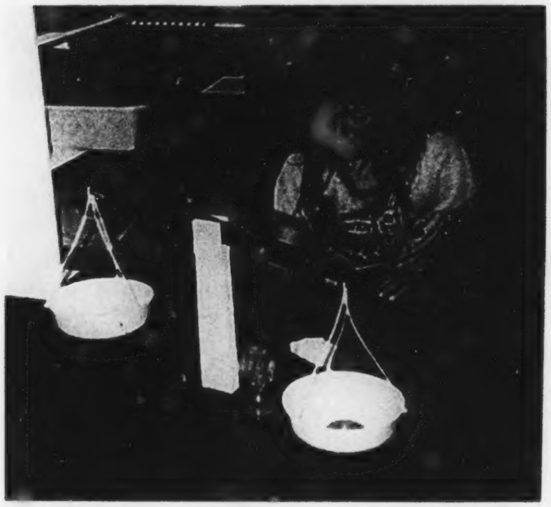
Children in elementary school need many opportunities to develop math concepts through actions on concrete objects during spontaneous play, situations of daily living and projects. As children make decisions about how to arrange a group of blocks, sort, and count a set of buttons or compare objects on a balance, they begin to construct mental relationships. A child might separate a group of toy animals into two groups and then recombine the animals to make one group again. Such concrete experiences help children to develop logical-mathematical thinking that forms the basis for understanding the meaning of abstract symbols such as 3 + 5 = 8.

Learning Through Mathematics

Mathematics exploration in the primary years should be related to the child's immediate environment and should always be based on a sound foundation of concrete experiences. The classroom should contain many sets of objects for counting, matching, classifying, ordering, and making spatial relations. Activities can provide noncompetitive practice for concepts which have previously been developed.

Whenever new material and concepts are introduced, children at all stages of the primary program require extended periods of time to freely explore materials and concepts before more formal instruction begins. The exploration stage is the major focus of mathematical experiences for children at the beginning of the primary program (Baratta-Lorton, 1995).

Math activities are integrated with other relevant science or social studies projects such as plotting the growth of baby hamsters or making a model of the neighborhood.



Teachers create a risk-free environment that invites inquiry. They guide children's investigations by observing, asking questions, and making open suggestions that stimulate the development of logical thinking. They realize that all the steps children go through in thinking are important and children's "mistakes" are a necessary part of learning. They encourage children to self-correct and evaluate their own progress.

The goal of the math program is to enable children to use math through exploration, discovery, and solving meaningful problems. It is through appropriate experiences presented in logical sequences that positive dispositions develop and effective learning occurs. As children create and solve problems, they become confident in their own ability to make sense of their world and accept new mathematical challenges. While some aspects of mathematics will be integrated through themes and topics of study it is appropriate to introduce and practice some mathematical concepts and skills in specific blocks of instructional time devoted to mathematics.

Considerations for Teaching Mathematics

- Math has to do with the relationships among objects, events, and people, such as "how many," "how much," "larger than," "smaller than," "same," and "different." Young children explore these relationships through classifying, ordering, number, measurement, space, and time.

- Children within a group will be at different levels of development with regard to mathematical concepts. Mathematics concepts must be introduced in an age appropriate and individually appropriate manner.

- Children develop math concepts naturally through many experiences with concrete objects throughout the primary years before they can understand math concepts in an abstract way. They make a gradual transition to mathematical symbols through describing, drawing pictures, and writing about their experiences. Children become confused and frustrated when rushed into symbols too soon.

- Math concepts are used every day. Understanding math concepts helps people function in the world. This occurs through the daily use of common objects in the child's world.

- Teachers must decide and agree upon when it is generally appropriate to introduce math concepts. Teachers can gain valuable insights by doing their own informal research with children. Along with observations, readings and discussions about developmental stages in children's understanding of mathematics help teachers form the basis for curriculum decisions.

- Assessments in mathematics inform teachers' decision-making process. They should be stress-free and often provide valuable learning experiences for the child. Assessments may take the form of observations, tasks and interviews, and talking with children about their drawings, stories or other work. During the primary years when children are developing concepts, timed testing is not appropriate.

Children and Mathematics: Implications for the Primary Curriculum

An appropriate curriculum for young children to meet the NCTM Standards' overall goals must do the following:

1. *Address the relationship between young children and mathematics.* Children enter kindergarten with considerable mathematical experience, a partial understanding of many concepts, and some important skills, including counting. Nonetheless, it takes careful planning to create a curriculum that capitalizes on children's intuitive insights and language in selecting and teaching mathematical ideas and skills. It is clear that children's intellectual, social, and emotional development should guide the kind of mathematical experiences they should have in light of the overall goals for learning mathematics. The notion of a *developmentally appropriate* curriculum is an important one.

A developmentally appropriate curriculum encourages the exploration of a wide variety of mathematical ideas in such a way that children retain their enjoyment of and curiosity about mathematics. It incorporates real world contexts, children's experiences, and children's language in developing ideas. It recognizes that children need considerable time to construct sound understandings and develop the ability to reason and communicate mathematically. It looks beyond what children appear to know to determine how they think about ideas. It provides repeated contact with important ideas in varying contexts throughout the year and from year to year.

Programs that provide limited developmental work, that emphasize symbol manipulation and computational rules, and that rely heavily on paper-and-pencil work sheets do not fit the natural learning patterns of children and do not contribute to important aspects of children's mathematical development.

2. *Recognize the importance of the qualitative dimensions of children's learning.* The mathematical ideas that primary level children acquire form the basis for all further study of mathematics. Although quantitative considerations have frequently dominated discussions in recent years, qualitative considerations have greater significance. Thus, how well children come to understand mathematical ideas is far more important than how many skills they acquire. The success with which programs at later grade levels achieve their goals depends largely on the quality of the foundation established during the first five years of school.

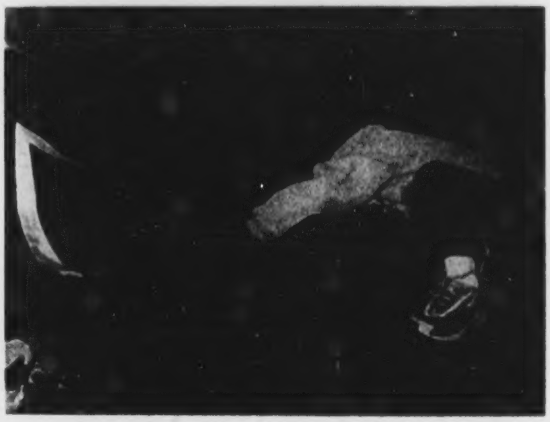
3. *Builds beliefs about what mathematics is, about what it means to know and do mathematics, and about children's view of themselves as mathematics learners.* The beliefs that young children form influence not only their thinking and performance during this time but also their dispositions and decisions about studying mathematics in later years. Beliefs also become more resistant to change as children grow older. Thus, affective dimensions of learning play a significant role in and must influence curriculum and instruction.

Assumptions

Several basic assumptions governed the selection and shaping of the NCTM K-4 Standards.

1. The primary curriculum should be conceptually oriented. The view that the primary curriculum should emphasize the development of mathematical understandings and relationships is reflected in the discussions about the content and emphasis of the curriculum. A conceptual approach enables children to acquire clear and stable concepts by constructing meanings in the context of physical situations and allows mathematical abstractions to emerge from empirical experience. A strong conceptual framework also provides an anchor for skill acquisition. Skills can be acquired in ways that make sense to children and in ways that result in more effective learning. A strong emphasis on mathematical concepts and understandings also supports the development of problem solving.

Emphasizing mathematical concepts and relationships means devoting substantial time to the development of understandings. It means relating this knowledge to the learning of skills by establishing relationships between the conceptual and procedural aspects of tasks. The time required to build an adequate conceptual base should cause educators to rethink when children are expected to demonstrate a mastery of complex skills. A conceptually oriented curriculum is consistent with the overall curricular goals in this report and can result in programs that are better balanced, more dynamic, and more appropriate to the intellectual needs and abilities of children.



2. *The primary curriculum should actively involve children in doing mathematics.* Young children are active individuals who construct, modify, and integrate ideas by interacting with the physical world, materials, and other children. Given these facts, it is clear that the learning of mathematics must be an active process. Throughout the NCTM Standards, such verbs as *explore, justify, represent, solve, construct, discuss, use, investigate, describe, develop,* and *predict* are used to convey this active physical and mental involvement of children in learning the content of the curriculum.

The importance of active learning by children has many implications for mathematics education. Teachers need to create an environment that encourages children to explore, develop, test, discuss, and apply ideas. They need to listen carefully to children and to guide the development of their ideas. They need to make extensive and thoughtful use of physical materials to foster the learning of abstract ideas.

Primary classrooms need to be equipped with a wide variety of physical materials and supplies. Classrooms should have ample quantities of such materials as counters; interlocking cubes; connecting links; base-ten, attribute, and pattern blocks; tiles; geometric models; rulers; spinners; colored rods; geoboards; balances; fraction pieces; and graph, grid, and dot paper. Simple household objects, such as buttons, dried beans, shells, egg cartons, and milk cartons also can be used.

3. *The primary curriculum should emphasize the development of children's mathematical thinking and reasoning abilities.* An individual's future uses and needs for mathematics make the ability to think, reason, and solve problems a primary goal for the study of mathematics. Thus, the curriculum must take seriously the goal of instilling in students a sense of confidence in their ability to think and communicate mathematically, to solve problems, to demonstrate flexibility in working with mathematical ideas and problems, to make appropriate decisions in selecting

strategies and techniques, to recognize familiar mathematical structures in unfamiliar settings, to detect patterns, and to analyze data. The NCTM Standards reflect the view that mathematics instruction should promote these abilities so that students understand that knowledge is empowering and that individual pieces of content are all related to this broader perspective.

Developing these characteristics in children requires that schools build appropriate reasoning and problem solving experiences into the curriculum from the outset. Further, this goals needs to influence the way mathematics is taught and the way students encounter and apply mathematics throughout their education.

Counting
Center
(Math)

4. *The primary curriculum should emphasize the application of mathematics.* If children are to view mathematics as a practical, useful subject, they must understand that it can be applied to a wide variety of real world problems and phenomena. Even though most mathematical ideas in the primary curriculum arise *from* the everyday world, they must be regularly applied *to* real world situations. Children also need to understand that mathematics is an integral part of real world situations and activities in other curricular areas. The mathematical aspects of that work should be highlighted.

Learning mathematics has a purpose. At the primary level, one major purpose is helping children understand and interpret their world and solve problems that occur in it. Children learn computation to solve problems; they learn to measure because measurement helps them answer questions about how much, how big, how long, and so on; and they learn to collect and organize data because doing so permits them to answer other questions. By applying mathematics, they learn to appreciate the power of mathematics.

5. *The primary curriculum should include a broad range of content.* To become mathematically literate, students must know more than arithmetic. They must possess a knowledge of such important branches of mathematics as measurement, geometry, data analysis, probability, and algebra. These increasingly important and useful branches of mathematics have significant and growing applications in many disciplines and occupations.

The curriculum at all levels needs to place substantial emphasis on these branches of mathematics. Mathematical ideas grow and expand as children work with them throughout the curriculum. The informal approach at this level establishes the foundation for further study and permits children to acquire additional knowledge they will need. These topics are highly appropriate for young learners because they make important contributions to children's mathematical development and help them see the usefulness of mathematics. They also provide productive, intriguing activities and applications.

The inclusion of a broad range of content in the curriculum also allows children to see the interrelated nature of mathematical knowledge. When teachers take advantage of the opportunity to relate one mathematical idea to others and to other areas of the curriculum, children acquire broader notions about the interconnectedness of mathematics and its relationships to other fields. The curriculum should enable all children to do a substantial amount of work in each of these topics at each grade level.

6. *The primary curriculum should make appropriate and ongoing use of calculators and computers.* Calculators can be a valuable tool for learning mathematics. Calculators enable children to explore number ideas and patterns, to focus on problem solving processes, and to investigate realistic applications. The thoughtful use of calculators can increase the quality of the curriculum as well as the quality of children's learning.

Teachers must be aware of children's developmental levels before introducing calculators. The child who does not conserve numbers and who has not constructed an understanding of the operations of addition and subtraction will not benefit from using a calculator to add and subtract until the logic to support its use has been developed. Calculators do not replace the need for children to develop these basic arithmetic understandings, to compute mentally, or to do reasonable paper-and-pencil computation. Classroom experiences indicate that young children take a common sense view about calculators and recognize the importance of not relying on them when it is more appropriate to compute in other ways. The availability of calculators means, however, that educators must develop a broader view of the various ways computation can be carried out and must place less emphasis on complex paper-and-pencil computation. Calculators also highlight the importance of teaching children to recognize whether results are reasonable.

The power of computers also needs to be used in contemporary mathematics programs. Computers cannot replace the child's need for actions on concrete objects, but once a child has developed a particular reasoning process, there are some excellent programs to help children rehearse, review, and extend concepts.

The thoughtful and creative use of technology can greatly improve both the quality of the curriculum and the quality of children's learning. Integrating calculators and computers into school mathematics programs at appropriate levels is critical in meeting the goals of redefining curriculum.

Mathematics Processes in the Primary Program

Mathematics as Problem Solving

Problem solving should be the central focus of the mathematics curriculum, a primary goal of all mathematics instruction and an integral part of every activity. Problem solving should permeate the entire program and provide the context in which concepts and skills are developed. A comprehensive and rich classroom environment supports and encourages problem solving efforts so that children feel free to share their thinking, take risks, try different strategies and ways of representing problems and value the problem solving process as much as the solution.

Problem solving in this sense is not the typical "story problem" at the end of a chapter in a math book. Rather, most problem situations arise naturally from school and everyday experiences that have meaning to children. In this context, problems may be thought of as "challenges," "speculations," "investigations" or "explorations" not only with numbers, but in all areas of mathematical thinking. The teacher may pose problems in the form of thought-provoking questions such as, "What do you think would happen if…?" or "Do you think there is any way to…?" Better yet, children are encouraged to create their own problems which have greater relevance for them.

Children are not directly taught steps of problem solving. Rather, through each child's unique problem solving process, they develop their own strategies such as using manipulatives, trial and error, drawing a picture, looking for a pattern or acting out a problem.

In the primary program, the child is provided numerous opportunities for problem solving to:
- Use problem solving approaches to investigate and understand mathematical content
- Formulate problems from everyday and mathematical situations
- Develop and apply strategies to solve a wide variety of problems
- Verify and interpret results with respect to the original problem
- Acquire confidence in using mathematics meaningfully

Mathematics as Reasoning and Proof

A major goal of mathematics instruction is to help children develop the belief that they have the power to do mathematics and that they have control over their own successes or failures. This autonomy develops as children gain confidence in their ability to reason and justify their thinking. It grows as children learn that mathematics is not simply memorizing rules and procedures, but that mathematics makes sense, is logical, and is enjoyable (NCTM, 2000).

Children develop mathematical reasoning thinking by acting on objects and by reflecting upon their actions. For example, a child classifies a set of attribute blocks into groups. As the child decides how to group or order the blocks, he/she is developing the logic of classes. In real-life problem solving situations such as creating a board game, the child must consider different possible moves and outcomes. Reasoning is also involved in the construction of various physical quantities such as conservation of amount (when water is poured from a tall, thin bottle into a short, fat bottle the child reasons it is the same amount because none was added or taken away).

At the primary level, the child is provided with numerous opportunities for reasoning in order to:

- Draw logical conclusions about mathematics
- Use manipulatives, models, known facts, properties, and relationships to explain their thinking
- Justify their answers and solution processes
- Use patterns and relationships to analyze mathematical situations
- Believe that mathematics makes sense (NCTM, 2000)

The child is provided with opportunities for developing mathematical reasoning, through activities such as:

- Exploring relationships among attribute blocks
- Exploring, creating and extending patterns
- Creating riddles (*What Am I?* I have 3 or 4 sides. All my angles are equal. My sides are not all equal. *Who Am I?* I am more than 20 and less than 30. I am not 25.)
- Developing and testing conjectures (looking for patterns using a 100's chart)
- Describing thinking strategies for the solution to a problem (think aloud)

Mathematics as Communication

Communication plays an important role in helping children construct links between their informal, intuitive notions and the abstract language and symbolism of mathematics. It also plays a key role in helping children make important connections among physical, pictorial, graphic, symbolic, verbal, and mental representations of mathematical ideas (NCTM, 2000). Attending to students' communications about their thinking provides teachers with a rich information base from which they can make sound instructional decisions.

Communication connections can be made between mathematics and literature. There are many fine children's books that contain math-related ideas such as counting, problem solving, money, seasonal cycles, time sequencing, relationships, etc. After hearing and reading stories, children can be encouraged to act out the stories with manipulatives or puppets, create solutions to problems found in books, and write and illustrate their own books. In the primary program, the child is provided with opportunities for communication to:

- Relate physical materials, pictures, and diagrams to mathematical ideas
- Reflect on and clarify their thinking about mathematical ideas and situations
- Relate their everyday language to mathematical language and symbols
- Realize that representing, discussing, reading, writing, and listening to mathematics are a vital part of learning and using mathematics (NCTM, 2000)

The child is provided with opportunities for developing mathematics communication through activities such as:

- Keeping a mathematics journal
- Writing a letter/list
- Role playing (sales clerk and shopper in a store)
- Collaborating on a project (deciding how large a cage to build for the class pet rabbit)
- Creating and illustrating a book about mathematics

Mathematical Connections

As children construct their understanding of mathematics, it is important that they connect their own intuitive knowledge with new ideas. When mathematical ideas are also connected to everyday experiences, both in and out of school, children become aware of the usefulness of mathematics (NCTM, 2000). Connections also need to be made within and among the various topics of mathematics.

At the primary level, the child is provided with numerous opportunities to make connections to:

- Link concepts through active learning
- Relate various representations of concepts to one another
- Recognize relationships among different topics in mathematics
- Use mathematics in other curriculum areas
- Use mathematics in their daily lives (NCTM, 2000)

At the primary level, the child is provided with opportunities for developing mathematical connections through:

- Providing extended exposure to integrated topics through projects and thematic units
- Using mathematical applications such as measurement throughout the year
- Looking for and integrating mathematical connections with other subject areas such as science, art, and the language arts
- Letting mathematical ideas naturally flow from one lesson to another, allowing time for students to explore, discuss, and generalize mathematical connections
- Encouraging students to compare and contrast

Content Strands

Number Sense and Numeration

Children must understand numbers if they are to make sense of the ways numbers are used in the everyday world. Intuition about number relationships helps children make judgments about the reasonableness of estimates and computational results. Children with good number sense have well-understood number meanings, have developed multiple relationships among numbers, and understand the effects of operations on numbers.

Children construct number meanings gradually through manipulating physical objects and using their own language to explain their thinking. Children's experiences with numbers are most beneficial when the numbers have meaning for them. Number symbols should be linked to concrete materials, and symbols should only be introduced after the child has had sufficient time to construct meaning with objects. More advanced concepts such as place value are not introduced until the child has a good grasp of relationships among lower numbers. Larger numbers should not be introduced in isolation; rather children should have the opportunity to "build" them by arranging objects in groups, adding, and counting.

In the primary program, the child is provided with numerous opportunities to use whole number concepts and skills in order to:
- Construct number meanings through real world experiences and the use of physical materials
- Count, match, order, group, and classify
- Develop number sense
- Develop an awareness of numbers encountered in the real world

Estimation

Estimation presents students with another dimension of mathematics. There are many instances in real life when an exact count or measure is either not necessary or impossible. When we use terms such as "about," "close to," or "a little less than," we are estimating.

Estimation should be an ongoing part of children's experiences. Children can be encouraged to develop an "estimation mindset" that includes what is meant by "estimate," when estimation is appropriate and how close an estimate is required in different situations. If they are encouraged to estimate, they will accept estimation as a legitimate part of mathematics.

When children enter school, they already have intuitive estimation abilities. For example, they know they are "almost six years old" or when it is "about noon." Yet when asked to estimate large numbers or abstract quantities out of their realm of experience, young children may give wildly divergent answers. The child who does not yet conserve number should not be asked to estimate how many seeds in a pumpkin. A suggestion is to begin estimation activities with small quantities of concrete objects and work up to larger numbers as children's mathematical abilities develop. Children are encouraged to estimate and then verify their estimate through actually counting. In this way, their estimates become more logical and reasonable.

In the primary program, the child is provided with numerous opportunities to estimate in order to:
- Explore estimation strategies
- Recognize when an estimate is appropriate
- Determine the reasonableness of results
- Apply estimation in working with quantities, measurement, computation and problem solving

The child is provided with opportunities for developing estimation through activities involving:

- Estimating quantity (and verifying by counting)
- Estimating length (and verifying by measuring)
- Estimating computation
- Estimating as a check when using calculators

Concepts of Whole Number Operations

Understanding the fundamental operations of addition, subtraction, multiplication, and division is central to knowing mathematics. These operations have their genesis in physical actions on objects. The young child is already intuitively familiar with combining and separating sets of objects. Many children have had experiences such as sharing a package of cookies among three friends.

Children need to develop "operation sense." Children develop concepts and relationships as they encounter the four basic operations in a wide variety of problem structures. Children with operation sense understand that addition and subtraction are opposite actions. A child might add 3 frogs to 4 toads to make 7 and then make the frogs jump away leaving only 4 toads. In addition to problems involving joining and separating, teachers should suggest problems involving comparing and equalizing. For example, a child might be given a situation in which one dog has 5 bones and the other has 9 with the question, "Can you make it fair?"

Gradually, as the child demonstrates understanding of the meaning of an operation, the symbols (+, -, x, ÷) can be introduced.

In the primary program, the child is provided with numerous opportunities to use addition, subtraction, multiplication, and division of whole numbers in order to:

- Develop meaning for the operations by acting on objects and discussing a rich variety of problem situations
- Relate the mathematics language and symbolism of operations to real problem situations and informal language
- Recognize that a wide variety of problem structures can be represented by a single operation
- Develop operation sense.

Whole Number Computation

The purpose of computation is to solve problems. Although computation is important in mathematics and in daily life, our technological age requires us to rethink how computation is done today. Almost all complex computation today is done by calculators and computers. In many daily situations, answers are computed mentally or estimates are sufficient. There are also times when paper-and-pencil algorithms are useful. It is important for children to know a variety of methods of computation and for teachers to have reasonable expectations regarding proficiency.

Clearly, paper-and-pencil computation cannot continue to dominate the curriculum or there will be insufficient time for children to learn other, more important mathematics they need now and in the future. Isolated paper-and-pencil drill and premature expectations of mastery are inconsistent with the NCTM Standards, cause poor retention, and require large amounts of time for re-teaching. By emphasizing underlying concepts, having children use physical materials, linking manipulation of objects to steps of the procedures, and developing thinking patterns, teachers can help children develop knowledge of basic facts and algorithms in a meaningful way. Rather than rote memorizing nonsense, children can construct computational facts using objects. Research indicates the conceptual approach results in better retention and, because children will not have to relearn what they memorized and forgot, the amount of time to learn computation is reduced in the long run.

In the primary program, the child is provided with numerous opportunities to develop whole number computation in order to:

- Model, explain, and develop reasonable proficiency with basic facts in application settings using a variety of manipulative objects
- Use a variety of mental computation and estimation techniques
- Use calculators in appropriate computational situations
- Select and use computation techniques appropriate to specific problems and determine whether the results are reasonable

Common Fractions

Fractions represent an extension of the child's knowledge about number. Experiences that children have in the early levels form a foundation for symbolic work with fractions in the upper grades.

All work with fractions at the primary level should involve situations of everyday life that can be easily modeled with real objects. Children have usually had experiences with sharing jellybeans or dividing a candy bar among friends. Subdivision of a whole into equal parts is fundamental to understanding fractions. Children can engage in many types of activities to develop an understanding of subdivision, such as folding and cutting paper strips.

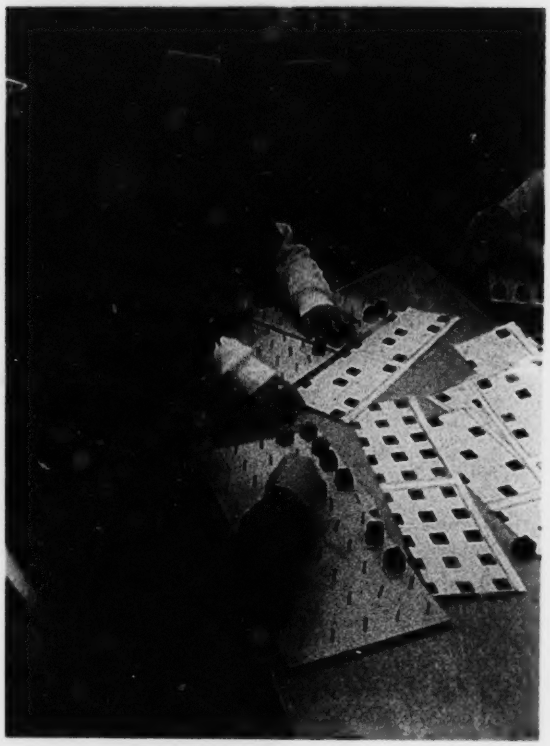
Symbols are introduced only after children have developed the concepts and oral language necessary for symbols to be meaningful and should be connected to concrete objects and to oral language.

In the primary program, the child is provided with numerous opportunities to use fractions to:

- Develop concepts of common fractions using manipulatives and real materials
- Develop number sense for common fractions
- Use models to explore equivalent fractions
- Apply fractions to problem situations

Patterns and Relationships (Algebra)

Patterns are everywhere. Exploring, identifying, and working with a wide variety of patterns help children to develop the ability to classify and organize information, and to understand how mathematics applies to the world in which they live. Working with patterns fosters the kind of mathematical thinking that serves as a foundation for the more abstract ideas studied in later years.



From the earliest years, children should be encouraged to look for patterns and regularities in events, shapes, designs, and numbers. Physical materials should be used to help children recognize and create patterns of their own. From this intuitive beginning, children later generalize pattern to the entire mathematical system.

In the primary program, the child is provided with numerous opportunities for the study of patterns and relationships in order to:

- Recognize, describe, extend, and create a wide variety of patterns, (taking a "pattern walk in the neighborhood," or making a placemat for a gift using rubber stampers to create a pattern around the border; stringing colored macaroni in patterns)
- Represent and describe mathematical relationships

Geometry and Spatial Sense

Geometry helps us represent and describe in an orderly manner the world in which we live. Children are naturally interested in the spatial activities and find them intriguing and motivating. Some of the first relationships that children build are spatial, concepts such as inside, outside, next to, over, and under. Since their early spatial abilities frequently exceed numerical skills, tapping on these strengths forms a basis for the development of other mathematical ideas.

Spatial understandings are necessary for interpreting, understanding, and appreciating our inherently geometric world. Children who develop a strong spatial sense are better prepared to develop concepts of number and measurement.

In developing geometric understandings, children need to investigate, experiment, and explore with everyday objects and other physical materials. As children work with a variety of objects such as blocks and geoboards, they learn about the properties of shapes. Folding and cutting paper shapes and using mirrors develops concepts of symmetry. Activities that ask children to visualize, draw, and compare objects in various positions help develop spatial sense.

Language (terminology, shape names) should not be the focus but should grow naturally out of experiences with objects. Of particular importance is having children draw from real objects, because this helps children construct spatial relationships. Drawing should be part of learning activities each day.

In the primary program, the child is provided with numerous opportunities to use two and three-dimensional geometry in order to:

- Describe, model, draw, and classify shapes
- Investigate and predict the results of combining, subdividing, and changing shapes
- Develop spatial sense by constructing arrangements in space; drawing objects in various positions; observing effects of rotations and displacements; and imagining how objects would look from different points of view
- Relate geometric ideas to number and measurement ideas
- Recognize and appreciate geometry in the world.

Measurement

Measurement is important because of its usefulness in every day life. At the primary level emphasis is placed on developing a foundation in the basic concepts underlying measurement. Children need to understand the attribute being measured as well as what it means to measure. Before they are capable of such understanding, they must first experience a variety of activities that focus on comparing objects directly, covering them with various units, and counting the units.

If children's initial explorations use nonstandard units, they will develop some understandings about units and come to recognize the necessity of standard units in order to communicate. This process, however, cannot be rushed. Premature use of instruments (such as rulers) and formulas leaves children without the understanding necessary to solve measurement problems. If a child does not yet conserve length (thinks that a stick gets longer or shorter depending upon how it looks), what sense can measuring with a ruler make?

Estimation activities should be integrated throughout measurement. The child should first estimate and then verify with real objects. Textbook exercises cannot substitute for activities that answer meaningful questions about real problems.

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In the primary program, the child is provided with numerous opportunities to use measurement in order to:

- Understand the attributes of length, capacity, mass (weight), area, time, and temperature
- Develop the process of measuring and concepts related to units of measurement
- Make and use estimates of measurement
- Make and use measurements in every day situations.

Data Analysis

Collecting, organizing, describing, displaying, and interpreting data, as well as making decisions and predictions on the basis of that information are important skills in our society. These processes are particularly appropriate for young children because they can be used to solve problems that are inherently interesting and offer rich opportunities for mathematical inquiry.

Graphing is a natural outgrowth of many activities. As children arrange and group objects, they often spontaneously line them up in one-to-one correspondences. A next step would be to represent the objects with pictures and later symbols. Young children should be encouraged to construct their own graphic representations of objects rather than being given adult formats to fill in.

Children are very interested in information about themselves. An appropriate group activity is the collection of data such as, "What are our favorite ice cream flavors?" "What pets do we own?" or any number of characteristics such as eye color or gender. Class graphs can give children a sense of the group characteristics as well as experience with representing data.

In the primary program, mathematics should include experiences with data analysis and probability so students can:

- Collect, organize, and describe data
- Construct, read, and interpret displays of data (such as graphs)
- Formulate and solve problems that involve collecting and analyzing data

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Descriptors of Learning in Mathematics

Early Primary	Later Primary
Dispositions	
The child: ▪ Develops confidence in using mathematics meaningfully ▪ Recognizes and appreciates mathematics in the world ▪ Applies mathematics to everyday problems ▪ Enjoys participating in mathematics activities	The child: ▪ Develops confidence in using mathematics meaningfully ▪ Recognizes and appreciates mathematics in the world ▪ Applies mathematics to everyday problems ▪ Enjoys participating in mathematics activities
Mathematics Processes	
Mathematics as Problem Solving	
The child: ▪ Formulates problems from everyday and mathematical situations ▪ Recognizes and restates problem using objects, pictures, or words ▪ Clarifies problem by asking questions ▪ Solves problems by acting out, making a diagram or constructing a model	The child: ▪ Formulates problems from everyday and mathematical situations ▪ Recognizes and restates problem using objects, pictures, or words, and number sentences ▪ Clarifies problems by exploring alternate interpretations ▪ Solves problems by making a pattern, guess and check, or by writing and solving number sentences ▪ Verifies and interprets results of problem solving ▪ Uses a calculator (where appropriate) to solve problems

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Mathematics Processes	
Mathematics as Reasoning and Proof	
The child: ▪ Demonstrates confidence in ability to reason and justify thinking ▪ Sees logic and believes that mathematics makes sense	The child: ▪ Demonstrates confidence in ability to reason and justify thinking ▪ Sees logic and believes that mathematics makes sense
Mathematics as Communication	
The child: ▪ Relates concrete materials to mathematical ideas ▪ Relates pictures and diagrams to mathematical ideas ▪ Relates everyday language to mathematical language and symbols	The child: ▪ Makes connections among concrete, pictorial, and symbolic abstract representations of mathematical ideas ▪ Relates pictures and diagrams to mathematical ideas ▪ Relates everyday language to mathematical language and symbols ▪ Reflects on and clarifies thinking about mathematical ideas
Mathematics as Connections	
The child: ▪ Connects own knowledge with new ideas ▪ Uses mathematics in daily life ▪ Uses mathematics in other curriculum areas	The child: ▪ Connects own knowledge with new ideas ▪ Uses mathematics in daily life ▪ Uses mathematics in other curriculum areas ▪ Recognizes relationships among different topics in mathematics

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Content Strands	
Number Sense and Numeration	
The child: ▪ Develops one-to-one correspondence among sets of objects, creates equivalent groups ▪ Relates a single numeral to a group of objects, uses number words ▪ Counts forward and backward ▪ Uses ordinal numbers ▪ Compares groups using "more," "fewer" ▪ Estimates number of checks by counting and grouping ▪ Applies the use of number to everyday situations	The child: ▪ Counts larger numbers, skip counts ▪ Relates numerals to numbers of objects ▪ Realizes that a given number of objects remains constant regardless of arrangement (conserves number) ▪ Demonstrates understanding of the numeration system ▪ Refines estimates and checks by counting and grouping ▪ Groups objects by fives, tens ▪ Develops concept of place value (including regrouping) using concrete materials and symbols.
Estimation	
The child: Explores estimation strategies Estimates small numbers of objects and verifies by counting Uses estimation in problem solving	The child: Explores estimation strategies Recognizes when an estimate is appropriate Uses estimation to check computation Determines reasonableness of results Applies estimation in working with quantities, measurements, computation, and problem solving

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Content Strands	
Concepts of Whole Number Operations and Computation	
The child: ▪ Demonstrates processes of addition and subtraction by combining and separating objects ▪ Explores possible combinations for a given number of objects ▪ Records combinations by drawing, stamping or pasting objects ▪ Solves simple verbal problems involving addition and subtraction with objects	The child: ▪ Demonstrates processes of addition and subtraction by combining and separating objects ▪ Constructs and demonstrates knowledge of combinations for numbers (to ten and beyond) ▪ Records combinations by drawing and writing stories ▪ Develops understanding of terminology (add, take away, plus, minus, equals) in problem solving contests ▪ Reads and writes expressions and number sentences in horizontal and vertical formats ▪ Creates and solves addition and subtraction problems of various structures (sums, how many more, how many left, difference, multi-step problems) ▪ Creates, solves, writes, and illustrates own story problems ▪ Finds and records sum of several one-digit numbers ▪ Using objects, finds and records sum of two-digit numbers with and without grouping ▪ Explores multiplication and division by creating arrays, sharing, and repeated addition of objects ▪ Records multiplication and division of single digits by drawing and writing

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Content Strands	
Common Fractions	
The child: ▪ Develops understanding of sharing by dividing whole objects or groups of objects into equal-sized amounts	The child: ▪ Relates the language of sharing whole objects or groups of objects to common fractions ▪ Recognizes and represents common fractions using objects and by drawing ▪ Compares common fractions using objects or by drawing
Patterns and Relationships	
Patterns The child: ▪ Recognizes, describes, and creates patterns ▪ Reverses, extends, and inserts objects into patterns	The child: ▪ Recognizes patterns in real life and in mathematics (geometric patterns) ▪ Identifies, describes, extends and creates patterns with numbers
Relations The child: ▪ Compares objects according to size (larger, smaller) ▪ Orders objects according to magnitude of characteristic (length, size, amount)	The child: ▪ Inserts elements into the appropriate position in an ordered series ▪ Makes correspondences between ordered series and relates elements to ordinal number ▪ Orders objects by mass (using a balance); by internal volume (by pouring)

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Content Strands	
Patterns and Relationships continued	
Classification The child:	The child:
▪ Makes arrangements of objects	▪ Classifies objects by several attributes; maintains consistent criteria
▪ Recognizes a common characteristic in a group of objects	▪ Develops class-inclusion (part-whole relationships among classes)
▪ Groups by single attribute and describes criteria	
Geometry and Spatial Sense	
The child:	The child:
▪ Builds, describes, and draws spatial arrangements of objects	▪ Identifies, describes, models, draws, and classifies polygons
▪ Sees part-whole relationships in whole objects among groups of objects	▪ Identifies, describes common 3-D shapes
▪ Matches two-dimensional arrangement	▪ Classifies 3-D shapes
▪ Identifies, describes, models, draws, and classifies plane figures	▪ Sees relationship between plane figures and 3-D shapes
▪ Classifies 3-D shapes informally	▪ Completes and creates symmetrical figures
▪ Explores and develops spatial relationships such as inside/outside, top/bottom, above/below, between, next to, etc.	▪ Constructs right and left relationships
	▪ Graphs on a horizontal or vertical number line
▪ Develops relationships of order in space	▪ Knows how things would look from another point of view; begins to draw objects in perspective
▪ Begins to draw overlapping objects	
▪ Recognizes geometry in the world	▪ Knows an object does not change in length when its position changes (conserves length)

Descriptors of Learning in Mathematics

Early Primary	Later Primary
Content Strands	
Measurement	
The child: • Compares lengths and sizes of objects directly ▪ Compares objects on a balance ▪ Estimates, measures, and records length using non-standard units ▪ Compares amounts of liquids using various sizes of containers ▪ Describes temperature using relative terms ▪ Explores the values of coins and uses of money in concrete problem solving situations ▪ Relates concepts of time to experience ▪ Sequences events according to time; e.g. the daily schedule	The child: ▪ Develops understanding of the need for using standard units ▪ Estimates, measures, and records length using standard units ▪ Estimates, measures, and records area using concrete materials ▪ Estimates, measures, and records mass of objects using non-standard units ▪ Investigates, estimates, and measures capacity using concrete materials ▪ Describes, reads, and records temperature ▪ Makes change; solves problems involving money ▪ Creates and solves problems involving length, area, mass or capacity ▪ Tells time using a clock
Data Analysis	
The child: ▪ Collects first-hand data by counting • Sorts, classifies, and displays information using graphs (concrete, pictorial) ▪ Reads, discusses, and interprets displayed data	The child: ▪ Collects first-hand data by counting and measuring ▪ Extracts second-hand data from presented sources, (tables, lists, visuals, printed resources…) ▪ Sorts, classifies, and displays information using graphs (pictorial and symbolic) ▪ Reads, discusses, and interprets displayed data ▪ Solves problems involving diagrams, tables, graphs

NCTM Standards

(Charts from Principles and Standards for School Mathematics, 2000, reprinted with permission)

Number and Operations

Standard Instructional programs from pre-kindergarten through grade 12 should enable all students to—	**Pre-K–2 Expectations** In pre-kindergarten through grade 2 all students should—	**Grades 3–5 Expectations** In grades 3–5 all students should—
Understand numbers, ways of representing numbers, relationships among numbers, and number systems	• Count with understanding and recognize "how many" in sets of objects • Use multiple models to develop initial understandings of place value and base-ten number system • Develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections • Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers • Connect number words and numerals to the quantities they represent, using various physical models and representations • Understand and represent commonly used fractions, such as, 1/3, 1/4, and 1/2	• Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers and decimals • Recognize equivalent representations for the same number and generate them by decomposing and composing numbers • Develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers • Use models, benchmarks, and equivalent forms to judge the size of fractions • Recognize and generate equivalent forms of commonly used fractions, decimals, and percents • Explore numbers less than 0 by extending the number line and through familiar applications • Describe classes of numbers according to characteristics such as the nature of their factors
Understand meanings of operations and how they relate to one another	• Understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations • Understand the effects of adding and subtracting whole numbers • Understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally	• Understand various meanings of multiplication and division • Understand the effects of multiply and dividing whole numbers • Identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems • Understand and use properties of operations, such as the distributivity of multiplication over addition
Compute fluently and make reasonable estimates	• Develop and use strategies for whole-number computations, with a focus on addition and subtraction • Develop fluency with basic number combinations for addition and subtraction • Use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators	• Develop fluency with basic number combinations for multiplication and division and use these combinations to mentally compute related problems, such as 30 x 50 • Develop fluency in adding, subtracting, multiplying, and dividing whole numbers • Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results • Develop and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience • Use visual models, benchmarks, and equivalent forms to add and subtract commonly used fractions and decimals • Select appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation and use the selected method or tool

Algebra

Standard Instructional programs from pre-kindergarten through grade 12 should enable all students to—	**Pre-K–2 Expectations** In pre-kindergarten through grade 2 all students should—	**Grades 3–5 Expectations** In grades 3–5 all students should—
Understand patterns, relations, and functions	• Sort, classify, and order objects by size, number, and other properties • Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another • Analyze how both repeating and growing patterns are generated	• Describe, extend, and make generalizations about geometric and numeric patterns • Represent and analyze patterns and functions, using words, tables, and graphs
Represent and analyze mathematical situations and structures using algebraic symbols	• Illustrate general principles and properties of operations, such as commutativity, using specific numbers • Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations	• Identify such properties as communtativity, associativity, and distributivity and use them to compute with whole numbers • Represent the idea of a variable as an unknown quantity using a letter or a symbol • Express mathematical relationships using equations
Use mathematical models to represent and understand quantitative relationships	• Model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols	• Model problem situations with objects and use representations such as graphs, tables, and equations to draw conclusions
Analyze change in various contexts	• Describe qualitative change, such as a student's growing taller • Describe quantitative change, such as a students' growing two inches in one year	• Investigate how a change in one variable related to a change in a second variable • Identify and describe situations with constant or varying rates of change and compare them

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Geometry

Standard Instructional programs from pre-kindergarten through grade 12 should enable all students to—	**Pre-K–2 Expectations** In pre-kindergarten through grade 2 all students should—	**Grades 3–5 Expectations** In grades 3–5 all students should—
Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships	▪ Recognize, name, build, draw, compare, and sort two- and three-dimensional shapes ▪ Describe attributes and parts of two- and three-dimensional shapes ▪ Investigate and predict the results of putting together and taking apart two- and three-dimensional shapes	▪ Identify, compare, and analyze attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes ▪ Classify two- and three-dimensional shapes according to their properties and develop definitions of classes of shapes such as triangles and pyramids ▪ Investigate, describe, and reason about the results of subdividing, combining, and transforming shapes ▪ Explore congruence and similarity ▪ Make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions
Specify locations and describe spatial relationships using coordinate geometry and other representational systems	▪ Describe, name, and interpret relative positions in space and apply ideas about relative position ▪ Describe, name, and interpret direction and distance in navigating space and apply ideas about direction and distance ▪ Find and name locations with simple relationship such as "near to" and in coordinate systems such as maps	▪ Describe location and movement using common language and geometric vocabulary ▪ Make and use coordinate systems to specify locations and to describe path ▪ Find the distance between points along horizontal and vertical lines of a coordinate system
Apply transformations and use symmetry to analyze mathematical situations	▪ Recognize and apply slides, flips, and turns ▪ Recognize and create shapes that have symmetry	▪ Predict and describe the results of sliding, flipping, and turning two-dimensional shapes ▪ Describe a motion or a series of motions that will show that two shapes are congruent ▪ Identify and describe line and rotational symmetry in two- and three-dimensional shapes and designs
Use visualizations, spatial reasoning, and geometric modeling to solve problems	▪ Create mental images of geometric shapes using spatial memory and spatial visualization ▪ Recognize and represent shapes from different perspectives ▪ Relate ideas in geometry to ideas in number and measurement ▪ Recognize geometric shapes and structures in the environment and specify their location	▪ Build and draw geometric objects ▪ Create and describe mental images of objects, patterns, and paths ▪ Identify and build a three-dimensional object from two-dimensional representations of that object ▪ Identify and build a two-dimensional representation of a three-dimensional object ▪ use geometric models to solve problems in other areas of mathematics, such as number and measurement ▪ recognize geometric ideas and relationships and apply them to other disciplines and to problems that rise in the classroom or in everyday life

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Measurement

Standard Instructional programs from pre-kindergarten through grade 12 should enable all students to—	**Pre-K–2 Expectations** In pre-kindergarten through grade 2 all students should—	**Grades 3–5 Expectations** In grades 3–5 all students should—
Understand measurable attributes of objects and the units, systems, and processes of measurement	▪ Recognize the attributes of length, volume, weight, area, and time ▪ Compare and order objects according these attributes ▪ Understand how to measure using nonstandard and standard units ▪ Select an appropriate unit and tool for the attribute being measured	▪ Understand such attributes as length, area, weight, volume, and size of angle and select the appropriate types of unit for measuring each attribute ▪ Understand the need for measuring with standard units and become familiar with standard units in the customary and metric systems ▪ Carry out simple unit conversions, such as from centimeters to meters, within a system of measurement ▪ Understand that measurements are approximations and understand how differences in units affect precision ▪ Explore what happens to measurements of a two-dimensional shape such as its perimeter and area when the shape is changed in some way
Apply appropriate techniques, tools, and formulas to determine measurements	▪ Measure with multiple copies of units of the same size, such as paper clips laid end to end ▪ Use repetition of a single unit to measure something larger than the unit, for instance, measuring the length of a room with a single meterstick ▪ Use tools to measure ▪ Develop common referents for measures to make comparisons and estimates	▪ Develop strategies for estimating the perimeters, areas, and volumes of irregular shapes ▪ Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles ▪ Select and use benchmarks to estimate measurements ▪ Develop, understand, and use formulas to find the are of rectangles and related triangles and parallelograms ▪ Develop strategies to determine the surface areas and volumes of rectangular solids

Data Analysis and Probability

Standard Instructional programs from pre-kindergarten through grade 12 should enable all students to—	**Pre-K–2 Expectations** In pre-kindergarten through grade 2 all students should—	**Grades 3–5 Expectations** In grades 3–5 all students should—
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	• Pose questions and gather data about themselves and their surroundings • Sort and classify objects according to their attributes and organize data about the objects • Represent data using concrete objects, pictures, and graphs	• Design investigations to address a question and consider how data-collection methods affect the nature of the data set • Collect data using observations, surveys, and experiments • Represent data using tables and graphs such as line plots, bar graphs, and line graphs • Recognize the differences in representing categorical and numerical data
Select and use appropriate statistical methods to analyze data	• Describe parts of the data and the set of data as a whole to determine what the data show	• Describe the shape and important features of a set of data and compare related data sets, with an emphasis on how the data are distributed • Use measures of center, focusing on the median, and understand what each does and does not indicate about the data set • Compare different representations of the same data and evaluate how well each representation shows important aspects of the data
Develop and evaluate inferences and predictions that are based on data	• Discuss events related to students' experiences as likely or unlikely	• Propose and justify conclusions and predictions that are based on data and design studies to further investigate the conclusion or predictions
Understand and apply basic concepts of probability		• Describe events as likely or unlikely and discuss the degree of likelihood using such words as certain, equally likely, and impossible • Predict the probability of outcomes of simple experiments and test the predictions • Understand that the measure of the likelihood of an event can be represented by a number from 0 to 1

Connecting Widely-Held Expectations with Mathematics Standards and Benchmarks

This work is the result of several rural school districts working to align the Primary Program's Widely-Held Expectations to the McREL Compendium standards and benchmarks.

(Kendall, J. S. & Marzano, R. J. (1997). *Content knowledge: A compendium of standards and benchmarks for K-12 education (2nd ed.).* Alexandria, VA: Association for Supervision and Curriculum Development and Mid-continent Regional Educational Laboratory, Inc.)

1. Understands and applies basic and advanced properties of the concepts of numbers

B-3	3–5	5–7	7–9	9-11	11–13
• Begin to recognize "one" and "more than one" • Count to nursery rhymes or the alphabet song	• Recognize and count up to five	• Count first by starting back at 1 each time something is added • Begin to pick up counting where they left off, starting with 7 and counting on to 9 • Count all types of things; play with counting forward or backward • Enjoy counting to 10 and idea of big numbers	• Begin to enjoy counting puzzles and games where they need to find a number between 10 and 99 • Order numbers from 0-10, and then 10-100 and much higher	• Begin to extend number sequences to take in large numbers from 1,000 to 10,000 and beyond	
		• Work with simple number facts showing different sums with many types of materials	• Represent more addition and subtraction "facts" in a variety of ways		
	• May recognize that two is always two and three is always three but does not apply this concept beyond five	• Begin to recognize that 10 is 10 or 20 is 20, no matter how objects are arranged in a group	• Make simple explorations with the concept of place value (combining groups of 100's, 10's, and 1's to make different numbers)	• Begin to understand the number system as a system built on tens particularly when working with base 10 blocks and other activities	• Begin to explore other ways to build number systems; for example, to think about numbers being represented by 0's and 1's
					• Begin to explore more complex number relationships and represent ideas in a greater number of ways • Begin to explore different simple number sequences which require more than simple addition and subtraction for their extension (2, 4, 8, 16, __ or 1, 3, 6, 10, __)

1. Understands and applies basic and advanced properties of the concepts of numbers, continued

B-3	3–5	5–7	7–9	9-11	11–13
• May use simple quantity words such as "one more cookie" or "more milk"	• Match objects in one set to objects in a second set				
	• Line up two or three objects using size or some other category	• Sequence things from the biggest to the smallest by size or other variable • May insert items into a sequence at the appropriate place	• May order things in a sequence in one set in relation to a sequence in a second set		
		• May isolate a set from a collection	• Are able to identify sets of objects with 2 or 3 attributes in common (separate triangles by color, size, and thickness)		
		• May realize that a collection can be sorted in more than one way	• Group numbers by twos, threes, fives, tens, and so on		
			• Begin to develop part and whole relationships and understand subtraction by separating a whole into parts	• Have a better coordination of parts and whole as related to both time and fractional concepts	• May develop the idea that the whole equal to the sum of its parts as a basis for the idea of percent (interest rates in savings accounts, cost of sale items 25%) • May begin to see the relationships between fractions and decimals

2. Uses basic and advanced procedures while performing the processes of computation

B-3	3–5	5–7	7–9	9-11	11–13
• Count to nursery rhymes or the alphabet song	• Recognize and count up to five	• Work with simple number facts showing different sums with many types of materials	• Represent more addition and subtraction "facts" in a variety of ways • Begin to develop part and whole relationships • Understand subtraction by separating a whole into parts	• Refine abilities to estimate • Build models of numbers 100, 1,000, 10,000 • Work on many whole number problems	• Begin to explore different simple number sequences which require more than simple addition and subtraction for their extension (2, 4, 8, 16, __ or 1, 3, 6, 10, __) • May begin to see the relationships between fractions and decimals • May develop the idea that the whole is equal to the sum of its parts as a basis for the idea of percent (interest rates in savings accounts, cost of sale items 25%)

3. Understands and applies basic and advanced properties of the concepts of measurement

B-3	3–5	5–7	7–9	9-11	11–13
• May follow the "path" of an object	• Use measurement words ("big and small," "short and tall," "near and far") • Line up two or three objects using size or some other category	• Sequence things from the biggest to the smallest by size or other variable • May insert items into a sequence at the appropriate place			
	• Identify portions when sharing	• Try measuring all sorts of things but with non-standard units	• Explore size relationships • Use rulers and yard sticks to measure length • Begin to estimate and measure and to use standard units to communicate similarities and differences	• Begin to see the need for a special measure • Continue to work on everyday problems involving length and may extend this to area, perimeter problems, using a variety of units • Begin to coordinate vertical and horizontal lines to help with ideas of area • May work on practical problems involving length, capacity, time and large numbers	• Use a variety of measurement tools • Begin to experience the ideas of mass and volume • Begin to use standard units for finding mass and volume based on many concrete activities

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4. Understands and applies basic and advanced properties of the concepts of geometry

B-3	3–5	5–7	7–9	9-11	11–13
• May follow the "path" "of an object	• May follow the "path" of an object	• Begin to develop a stable idea of a straight line	• Begin to develop the idea of vertical and horizontal lines		
• Begin to pick out one thing from a group. Sometimes find two or three that are the "same"	• Sort using single attribute	• Classify objects in a variety of ways • May insert items into a sequence at the appropriate place	• Begin to classify things in more complex ways and use general categories and subcategories • May order things in a sequence in one set in relation to a sequence in a second set		
• Begin to identify simple qualities of things like "soft" and "hot" and "cold"	• Learn more qualities of objects ("thick" and "thin")	• May realize that a collection can be sorted in more than 1 way			
	• Compare objects • Line up two or three objects using size or some other category • Recognize and name simple shapes (squares, circles, triangles)	• Sequence things from the biggest to the smallest by size or other variable		• Explore size relationships	
• Begin to get some ideas of how things are alike and how they are different	• Match pictures to actual shapes	• May isolate a set from a collection	• Are able to identify sets of objects with 2 or 3 attributes in common (separate triangles by color, size, and thickness)		
	• Use language to begin to get ideas about space and time ("next to," "on top of," "before," "after")		• Begin to estimate and measure and to use standard units to communicate similarities and differences		• May be curious about making drawings to scale
					• Begin to explore three-dimensional objects
	• Recognize simple patterns	• Use pattern blocks and other materials to make and extend patterns		• Explore patterns in numbers	

5. Understands and applies basic and advanced properties of the concepts of statistics, data analysis, and probability

B-3	3–5	5–7	7–9	9-11	11–13
• Begin to recognize "one" and "more than one"					
• Begin to pick out one thing from a group. Sometimes find two or three that are the "same"	• Sort using a single attribute	• Classify objects in a variety of ways • Sorts, classifies, and displays information using graphs (concrete, pictorial)	• Begin to classify things in more complex ways and use general categories and subcategories • Sorts, classifies, and displays information using graphs (pictorial and symbolic)	• Become comfortable using simple graphs to show relationships	• Begin to use line and pie graphs to represent information and explore relationships
• Begin to identify simple qualities of things like "soft" and "hard" or "hot" and "cold	• Learn more qualities of objects ("thick" and "thin")	• Collects first-hand data by counting • May realize that a collection can be sorted in more than 1 way	• Collects first-hand data by counting and measuring • Extracts second-hand data from presented sources (e.g., tables, lists, visuals, printed resources...)		
• May use simple quantity words such as "one more cookie" or "more milk"					
• Begin to get some ideas of how things are alike and how they are different	• Match pictures to actual shapes				
		• Reads, discusses, and interprets displayed data	• Reads, discusses, and interprets displayed data • Solves problems involving diagrams, tables, graphs		

6. Understands and applies basic and advanced properties of functions and algebra

B-3	3–5	5–7	7–9	9-11	11–13
• Begin to recognize "one" and "more than one"	• Recognize simple patterns	• Use pattern blocks and other materials to make and extend patterns • Sequence things from the biggest to the smallest by size or other variable • May insert items into a sequence at the appropriate place • May realize that a collection can be sorted in more than one way • May isolate a set from a collection	• Begin to classify things in more complex ways and use general categories and subcategories • Group numbers by twos, threes, fives, tens, and so on • Are able to identify sets of objects with 2 or 3 attributes in common	• Explore patterns in number systems • Explore size relationships • Become comfortable using simple graphs to show relationships	
					• May have some early experiences with the idea of variable

Sciences in the Primary Program

Common Understandings

It is instinctive for the primary child to search out, describe, and explain patterns of events experienced in the natural and physical world. Primary science is based upon exploration. Children develop an understanding of science as they investigate and interact with real objects and phenomena. They are natural scientists: curious, observant, and questioning. Their knowledge of science grows out of an attempt to find meaning in their environment.

Children make sense of the world by relating new experiences to some prior knowledge. They organize their unique experiences in ways that make sense to them, such as the following:

- Objects have particular size, color, shape, and texture
- Objects float, sink, roll, live, and grow
- Living things change form as they grow and develop

> *Effective teachers of science not only provide a supply of engaging, relevant materials, but they also give learners conceptual support. They state what is known; paraphrase, redirect, and question ideas and approaches; provide information for the students' consideration (or arrange for learners to have access to a source that provides information); and assist with problem solving. Tinkering is pivotal to later investigation, as it provides the basis from which children formulate questions and set about finding answers.*
>
> Yelland, 2000

Children need opportunities to present their views to other children and adults. By exchanging opinions with others, children begin to move from an egocentric point of view and compare their views with those of others. They relate their concepts of what happens in school science to what happens in their personal experience. Their concepts about the natural world are expanded and enhanced through sharing of experiences.

The science curriculum provides for a balance among the dimensions and disciplines of and the approaches to science education for primary children. The development of Dispositions, skills, processes, knowledge, and understanding is given equal emphasis. The curriculum provides for a balance among the three broad disciplines of life science, physical science, and earth/space science. Each year children should have experiences in each of these disciplines.

A balanced approach should remain during the primary years with topic areas addressed at different points and in a variety of ways. Schools should plan experiences to avoid duplication of learning activities. The curriculum, the resources that support it, and the programs and activities that are developed in classrooms should together describe a balance in approaches to instruction. These approaches should include hands-on, activity-centered experiences that consider the interests, abilities, and needs of children.

Science as an Integral Part of the Primary Program

Thematic units of study are used in many primary classrooms to explore ideas and develop understanding. In designing a theme, a teacher considers a number of curricular areas, developing relationships among disciplines to provide for greater meaning and relevance. For example, in a science theme about "color," children could explore the possibilities in literature, writing, speaking, visual art, music, and movement, in addition to science. Thus, the teacher satisfies a multitude of curricular objectives within a single theme.

Where to Begin?

A child might bring something to school that has the potential for some science study and that catches the interest of the class. Children might generate lists of what they already know about the item and what they would like to find out. Thus, the teacher embarks upon a topic or theme with the class that arises from the interests of the children. When developing the theme, the teacher plans experiences that enhance development in each of the dimensions of science, Dispositions, skills, and knowledge, and which address the three broad disciplines of biological, physical, and earth/space science. The following are content standards recommended by the National Science Education Standards for grades K–4.

Life science

- Characteristics of organisms
- Life cycles of organisms
- Organisms and environments

Physical science

- Properties of objects
- Position and motion of objects
- Light, heat, electricity, and magnetism

Earth/space science

- Properties of earth materials
- Objects in the sky
- Changes in earth and sky

Considerations

- **Science for all students.** Early impressions about who learns and does science appear to be persistent and lasting. Science should be modeled as an activity involving all kinds of people and affecting all people in their daily lives. Models must be free of gender and ethnic bias.

- **Science as inquiry**. From the earliest grade levels, students should experience science in a form that engages them in the active construction of ideas and explanations to enhance their opportunities to develop the abilities of doing science.

- **Science/technology/society connection.** Science is not something that happens in a book, on a screen, or in a laboratory far away. It is part of the everyday experience. Advances in science have made possible the technology accessible to us; technology has made marked changes to the society in which we live. Society's demands have encouraged further technological and scientific development, some considered beneficial, others not. There are many issues and points of view to be considered for every topic, and children should be assisted in recognizing that there are many consequences to decisions and to progress.

- **Experimentation.** The active process of science is learned, not taught. Children should be provided with a variety of opportunities for playing, questioning, exploring, demonstrating, investigating, and experimenting. Experimentation also adds opportunities for hypothesizing and predicting, observing, collecting data over time, formulating conclusions, and comparing results with the original hypothesis/prediction. Each of these approaches can be appropriate for different children of different interests and abilities, using a variety of themes. Some of these approaches have implications for materials, supplies, and equipment that must be readily available to the children.

- **Resources.** The curriculum supports each child at his or her level of interest, ability, and comfort with science. The resources, too, must support the flexibility and variety of the curriculum. It is neither possible nor desirable to anticipate resources for the entire range of interests that could arise. However, the teacher should feel supported by enough quality materials to begin to provide for a range of interests and abilities, as well as feel encouraged to identify, acquire, and develop resources to more fully meet the needs of children. When designing a combination most appropriate to the needs of the children, the teacher should consult a range of sources including resources of the school and district, organizations and associations, and commercial suppliers. The need for resources extends to supplies and equipment for daily classroom use.

Learning Through Science

Science Content and Possibilities

There are numerous sources of science content on which teachers can draw. The children, reflecting their interests and concerns, should also generate topics. These are perhaps the most dynamic sources of content. A balance of content should be selected for science activities. Experiences should include topics in the life, physical, and earth/space sciences. Content possibilities include:

Life Science

Living Things	**You and Your Body**	**You and the Environment**
Plants	Food/nutrition	Animal communities
Growing seeds	Senses	Pond life
Plants and seasons	Ourselves	Grasslands
Animal behavior	Your body	Woodlands
Animals and seasons	Health	Recycling
Animal babies	Drugs	Endangered animals
Aquatic studies		Rain forests
Farming and seasons		

Physical Science

Properties of Matter	**Heat and Temperature**	**Light and Color**
Solids, liquids, gases	Ice cubes	Light
Water play	Hot and cold	Shadows
Changes in matter	Melting	Rainbows
Magnets	Freezing	
Simple machines		

Earth and Space Science

Earth Materials	**Atmosphere and Weather**	**Astronomy and Space**
Soil	Air and wind	Day and night
Rocks	Air pressure	The moon
Minerals	Kites	Sunlight
Fossils	Weather	Things in space
Water	Seasons	Planets
		U.S. space program
		Satellites

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Active Learning in Science

Themes and supporting activities should be:

- **Learner-centered.** At the heart of the primary program, the study of primary science should be linked to the child's interests. Children construct their own meanings from their experiences in order to make sense of the world around them. By incorporating their ideas into instructional strategies, it becomes possible for teachers to guide children toward accommodating their experiences into a more scientific view.

- **Activity-centered.** Concrete, hands-on experiences using everyday objects, children's objects, and outdoor experiences permit children to construct their own realistic understanding of what science is. Approaches should include the use of real-life experiences and manipulation of materials and equipment. Access to a variety of living things encourages dispositions of caring and responsibility.

- **Modeled by teachers.** The importance of modeling a positive attitude toward science has been well documented. Open-minded, enthusiastic teachers who encourage science to happen foster those dispositions in children. In this way, all children may be challenged to pursue their interests to the fullness of their potential. The different approaches of diverse cultures and the contributions made by different societies, including those of U.S. scientists, should be integral to science programs.

Learning Dimensions in Primary Science

Science supports each of the goals of the primary program in several ways. Science activities stimulate both cognitive and affective growth and development in children. The investigative nature of science is conveyed through inductive, concrete, and manipulative learning experiences. These experiences stimulate curiosity, inquiry, and problem solving. Science experiences also encourage scientific Dispositions, develop the ability to use the processes and skills of science, introduce a body of scientific knowledge, and promote critical, rational, and creative thinking.

The following dimensions of primary science education are from the British Columbia curriculum and reflected in the National Science Education Standards. Examples of activities and experiences are suggested for each one.

Dispositions: The primary program provides opportunities for the learner to develop appropriate dispositions toward science:

- Awareness and appreciation of science-interest in science and its relationship to the world and the future; the child interacts respectfully in support of the local environment.
- Curiosity—to question and to persevere in seeking solutions; the child observes and questions the ongoing changes in the growth of sugar crystals.
- Adaptability in a changing world—a willingness to expect and accept scientific change; the child modifies pre-conceptions on the basis of school experiences in science.

Processes and Skills: The primary program provides opportunities for children to develop the skills and processes of science:

Processes

- Observation—the perception of characteristics, similarities, differences, and changes through use of the senses; the child uses the senses to describe and distinguish among common rocks, foods, or other items.
- Classification—the organization of materials, events, and phenomena into logical groupings. At first, classification is a sorting process; the child sorts a group of blocks into sets according to common characteristics. Later, the child develops multi-stage sets and subsets to categorize different insects.
- Measurement—comparison of objects or events to standards of length, area, volume, mass, temperature, and time; the child measures each day's growth of sprouting seeds.
- Communication—presentation and explanation to others of objects or events, using various media. This communication is often in the form of diagrams, numbers, or graphs; using charts and graphs, the child explains similarities and differences among various seeds and their growth.
- Inference—the derivation of premises or conclusions concerning data, using past experience. Inferring from a set of data may lead to several non-conclusive inferences; the child suggests an explanation as to why frost remains longer on some areas of the schoolyard.

Skills

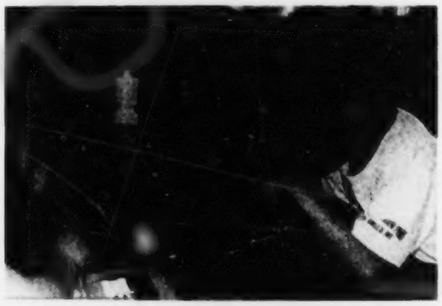
- Safe and appropriate use of equipment, materials, and techniques; the child handles the classroom hamster in a careful manner.
- The location, organization, and documentation of information; the child organizes a science presentation using displays, posters, and an oral report.
- The selection and use of methods to solve problems; the child investigates the problem of how to make a better ice-cube melter.

Thinking Skills: The primary program provides opportunities for children to develop thinking skills:

- Creativity—fluency in generating a number of ideas or solutions, flexibility in generating a wide variety of ideas, originality in generating unique ideas or solutions; the child suggests different uses for a cup.
- Rationality—the ability to look for natural causes of events; the child investigates causes of change in shadows over the course of a day; critical thinking—the ability to identify central issues, to recognize underlying assumptions, and to evaluate evidence.
- Recognize stereotypes and biases to identify essential, variable, and adequate data and to draw conclusions; the child is able to suggest some benefits and problems associated with the transportation of industrial chemicals.

Knowledge: The primary program provides opportunities for children to develop scientific knowledge:

- Facts, concepts, and understanding; the child describes the body parts of a spider and how it uses its spider web for survival.
- Scientific vocabulary; the child explains the meaning of the words like *melting, freezing, evaporation,* and *condensing.*
- Relationships among various scientific disciplines, the child recognizes what effects cold temperature has in animal behavior, in the freezing of water, and in the weathering of rocks.
- The history and nature of science, particularly in the American context, the child investigates Thomas Edison's contribution to the utilization of electricity in the U.S.
- The applications and limitations of science in the practical world, the child recognizes that science has provided immunization for many childhood diseases, although colds and flus persist.



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Descriptors of Learning in Science

Early Primary	Later Primary
Dispositions **Life, Physical, and Earth/Space**	
The child: ▪ Demonstrates curiosity about and interest in the natural world: • Asks questions and brings objects of a scientific nature and handles them with respect and enjoyment ▪ Demonstrates an appreciation of the patterns and diversity of the natural world: • Is aware of patterns found in nature (patterns in a leaf, day and night) ▪ Demonstrates safety measures when handling materials and equipment (uses care in handling magnifying glass and wears safety glasses when appropriate) ▪ Demonstrates a positive attitude toward the environment: • Shows care and concern for the immediate environment ▪ Demonstrates receptivity to change (shares early conceptions about the natural world)	The child: ▪ Demonstrates curiosity about and interest in the natural world: • Perseveres in seeking solutions to questions of a scientific nature (observes and questions changes in the growth of sugar crystals) ▪ Demonstrates an appreciation of the patterns and diversity of the natural world: • Investigates and applies knowledge of pattern to new situations (cycle of the moon, poetry, print-making, pattern in story) ▪ Demonstrates safety measures when handling materials and equipment (uses proper procedures when using microscope and wears safety glasses when appropriate) ▪ Demonstrates a positive attitude towards the environment: • Adjusts behavior to reflect a wider environmental consciousness ▪ Demonstrates receptively to change and other points of view: • Expects and accepts scientific change (modifies preconceptions on the basis of experiences in science)
Skills **Life, Physical, and Earth/Space**	
The child: ▪ Observes characteristics, similarities, differences, and changes: • Notes and discusses difference in materials, events, and phenomena	The child: ▪ Observes characteristics, similarities, differences, and changes: • Notes/records differences, similarities, commonalities in materials, events, phenomena

Descriptors of Learning in Science

<table>
<tr><th>Early Primary</th><th>Later Primary</th></tr>
<tr><td colspan="2">Skills
Life, Physical, and Earth/Space</td></tr>
<tr><td>The child:
▪ Classifies materials, events, and phenomena:
• Sorts according to non-traditional criteria (like/dislike, color, size, simple patterns)
▪ Makes measurements according to length, area, volume, mass, temperature and time:
• Measures using non-traditional units (uses unit blocks to measure self and others)
▪ Manipulates materials, supplies, and equipment safely and appropriately to the investigation (uses eye dropper appropriately to mix colored liquids)
▪ Communicates information in a variety of ways:
• Presents information by talking, drawing, building, or dramatizing
▪ Draws inferences from prior knowledge and experiences and makes predictions:
• Explanations are based on direct observation and concrete experience
▪ Demonstrates the ability to look for natural causes of events [rationality] (investigates the formation of shadows)
▪ Demonstrates creativity and critical thinking when exploring science problems:
• Generates a variety of unique ideas and solutions
• Selects from generated ideas and solutions, and defends selections</td><td>The child:
▪ Classifies materials, events, and phenomena:
• Sorts and verbalizes according to standard criteria (texture, mass, structure)
▪ Makes measurements according to length, area, volume, mass, temperature and time:
• Measures and records using standard units (measuring temperature in degrees Fahrenheit, graphing over a period of time)
▪ Manipulates materials, supplies, and equipment safely and appropriately to the investigation (uses the balance scale to determine mass of different materials)
▪ Communicates information in a variety of ways:
• Presents information using charts, graphs, or models
▪ Draws inferences from prior knowledge and experiences and make predictions:
• Hypothesizes from experience and observations
▪ Demonstrates ability to look for natural causes of events [rationality] (e.g. relates the length and the position of the shadow to the time of day)
▪ Demonstrates creativity and critical thinking when exploring science problem:
• Evaluates evidence, draws conclusions and takes appropriate action(based on evidence gathered through scientific exploration, child creates and suggest means by which school can reduce its paper consumption)</td></tr>
</table>

Descriptors of Learning in Science

Early Primary	Later Primary
Knowledge **Life, Physical, and Earth/Space**	
The child:	The child:
▪ Demonstrates an understanding of the relevant facts and concepts of the scientific world	▪ Demonstrates an understanding of the relevant facts and concepts of the scientific world
▪ Understands the needs of living things: • Describes the basic needs of plants and animals	▪ Understands the needs of living things: • Understands and discusses the relationships between and among living things
▪ Describes physical properties of common materials and phenomena: • Uses simple terms to describe properties (bright, dull, color)	▪ Describes physical properties of common materials and phenomena: • Uses scientific terms to describe properties (opaque, translucent, transparent)
▪ Gains understanding of the natural world and its operation: • Uses simple terms to describe immediate environment ("water changes to ice when it gets cold")	▪ Gains understanding of the natural world and its operations: • Discusses the scientific concepts evident in the immediate environment ("water freezes at 32° Fahrenheit")
▪ Uses appropriate scientific vocabulary related to topics being explored: • Names parts of a plant (tree, trunk, bark, leaf)	▪ Uses appropriate scientific vocabulary related to topics being explored: • Uses proper scientific names (deciduous, conifer)
▪ Demonstrates awareness of the relationships among the science disciplines (could we live on Mars)	▪ Demonstrates awareness of the relationships among the science disciplines (recognizing effects of cold in animal behavior, in freezing of water, and weathering of rocks)
▪ Demonstrates knowledge of the nature of science (science is a means of learning about the world around us)	▪ Demonstrates knowledge of the nature and history of science
▪ Recognizes the applications and limitations of science in the practical world (refrigeration preserves food but only for a limited time)	▪ Recognizes the applications and limitations of science in the practical world (science has provided immunization for many diseases, while cold and flus persist)

Physical Development and Well-Being in The Primary Program

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Aesthetic and Artistic Development
Social and Emotional Development
Intellectual Development
Physical Development and Well Being
Development of Responsibility

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Physical Education in the Primary Program

Common Understandings

"During the primary years, children's physical growth tends to slow down as compared to the extremely rapid physical growth that occurred during the first five years of life. Children gain greater control over their bodies and are able to sit and attend for longer periods of time. However, primary age children are far from mature physically and need to be active. Primary grade children are more fatigued by long periods of sitting than by running, jumping, or bicycling. Physical action is essential for these children to refine their developing skills, like batting a ball, skipping rope, or balancing on a beam. Expressing their newly acquired physical power and control also enhances their self-esteem" (Bredekamp, 1991).

> *Parents and teachers have become increasingly aware of the importance of providing children with meaningful movement experiences. There is a growing realization among educators that the vigorous physical activity engaged in by children plays an important role in their total development. For children, movement is at the very center of their life. It permeates all facets of their development, whether in the psychomotor, cognitive, or affective domains of human behavior.*
>
> Gallahue, 1987

Physical Activity and Well-Being

Opportunities for physical activity is integrated throughout each day as relevant to the curriculum and as needed for children to express themselves physically. Specialists work with classroom teachers and children (Bredekamp, 1991).

Participation in appropriate kinds and amounts of physical activity:

- Promote changes in brain structure and function in young children. Sensory stimulation through physical activity is essential for the optimal growth and development of the young nervous system
- Promotes early cognitive function through imitation, symbolic play, the development of language skills, and the use of symbols
- Assists in the development of perceptual abilities involving vision, balance, and tactile sensations
- Enhances the function of the central nervous system through the promotion of a healthier neuronal network
- Assists development of cognition through opportunities to develop learning strategies, decision-making, acquiring, retrieving, and integrating information and solving problems
- Fortifies the mineralization of the skeleton and promotes the maintenance of lean body tissue, while simultaneously reducing the deposition of fat

- Leads to proficiency in the neuromuscular skills that are the foundation for successful participation experiences in games, gymnastics, dance, and other activities
- Enhances self-concept and self-esteem as indicated by increased confidence, assertiveness, emotional stability, independence, and self-control
- Is instrumental in the development and growth of moral reasoning, problem-solving, creativity, and social competence
- Improves the psychosocial and physiological functions of individuals with mental and physical disabilities (Seefeldt, 1986)

The Importance of Physical Education

Physical education is an integral part of the primary program in that it contributes to its five major goals. The goal of physical development is most effectively met through a well-balanced developmental physical education program. Through the content and strategies employed, teachers can enhance and promote intellectual development in their students. Emotional and social growth can be fostered through a variety of individual and cooperative physical activities. A child can also develop artistically and aesthetically when engaged in areas such as creative movement. The physical education program emphasizes fair play, cooperation, and loyalty, which directly relate to the goal of responsible living. The physical education program provides children with experiences that help develop motor skills and problem-solving abilities through play and structured physical activities. It develops a child's level of health and fitness as well as enhances appreciation and enjoyment of human movement. Thus, physical education provides a unique contribution to the total development of the child.

Critical Elements of Physical Education

The primary physical education program helps children reach their highest intellectual, social/emotional, and physical potentials through the medium of physical activity. The program must include a wide selection of dance, gymnastics, games, fitness, and other activities using strategies that emphasize a creative and exploratory approach. The following elements are integral to planning and implementing a quality physical education program.

Quality Physical Education Programs

A quality physical education program designed to meet the needs of all students must include a variety of activities in the areas of dance, gymnastics, games, fitness, and activities in alternate environments. The emphasis is on a sequential, skill-based, cooperative, and process-oriented program. It is recommended that a qualified physical education teacher be available to assist in planning and implementing this program. Further assistance can be provided by other professional, para-professional, and support staff.

Daily Physical Education

Regular vigorous activity is crucial for learning movement skills and ensuring normal growth and development. It also affects fitness and has a marked influence on health attitudes and habits.

Facilities and Supplies

The gymnasium is an ideal learning environment for quality physical education. In most schools, physical education can easily be scheduled in the gymnasium two to three times per week. In order to provide daily physical activities, considerations may include team teaching with two or more groups, and beginning physical education classes promptly throughout the entire day. When there is no room in the gymnasium, alternate spaces can be used. These include the classroom with furniture moved aside, multi-purpose rooms, hallways, cafeterias or lunch rooms, fields, adjacent parks, grassy areas, and open spaces.

To maximize instructional time and to individualize learning experiences, class sets of all supplies must be available, for example, balls, bean bags, cones, hoops, skipping ropes, scoops.

Integration

Organizational, planning, and problem-solving abilities are important intellectual skills. Imaginative and creative thinking is equally important. The development of these skills can be clearly fostered through regular, quality physical education.

Every curriculum area can enrich the physical education program. Equally valuable is the ability for physical education to enhance specific concepts from other subject areas. An integrated approach fostering conceptual development focuses on the whole child as a learner.

Children with Special Needs

All children must be given an equal opportunity to participate in physical education in order to help them develop to their maximum potentials. "Children should not be excluded from a physical education program because of a disability, whether temporary or permanent, mild or severe, single or multiple" (Gallahue, 1987). Inclusionary physical education programs benefit children with and without disabilities, but for inclusion to be successful, support services need to be provided. These may include special personnel, special instruction, adapted materials/equipment, and curricular modifications.

Social/Emotional Safety

Teachers who encourage and appreciate individual differences will foster desirable attitudes toward physical education. A major objective is to develop a positive class environment in which everyone may be prepared to face challenges. Children need to respect their own and others' abilities, limitations, and personal rights.

Physical Safety

The environment of the physical education class affects the physical safety of every child. All children must be supervised during physical education activities. Equipment must be properly maintained. All instructional activities should be structured in accordance with the developmental abilities of each child. Children need to develop a responsible attitude toward their own safety and that of others.

Activities in Alternative Environments

A quality physical education program must provide a wide range of instructional and recreational opportunities. This includes exploring the dimensions of alternate environments which will develop a positive attitude toward potential lifetime activities. Started at an early age, these activities foster positive attitudes toward a healthy, active life-style. The range of lifetime activities will vary from community to community, according to the availability of facilities, resources, and geographic location.

Learning Through Physical Education

Physical Education from Primary to Graduation

National Standards for Physical Education

In 1986, an Outcomes Committee was appointed by the National Association for Sport and Physical Education (NASPE) to answer the question, "What should physically educated students know and be able to do?" Five major focus areas were included in the resulting definition specifying that a physically educated person:

1. Has learned skills necessary to perform a variety of physical activities
2. Is physically fit
3. Participates regularly in physical activity

4. Knows the implications of and the benefits from involvement in physical activities
5. Values physical activity and its contribution to a healthful lifestyle

A Standards and Assessment Task Force subsequently established content standards for the physical education school program that clearly identify consensus statements related to what a student should know and be able to do as a result of a quality physical education program. The National Standards for Physical Education indicate that a physically educated student:

1. Demonstrates competency in many movement forms and proficiency in a few movement forms
2. Applies involvement concepts and principles to the learning and development of motor skills
3. Exhibits a physically active lifestyle
4. Achieves and maintains a health-enhancing level of physical fitness
5. Demonstrates responsible personal and social behavior in physical activity settings
6. Demonstrates understanding and respect for differences among people in physical activity settings
7. Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction (NASPE, 1995)

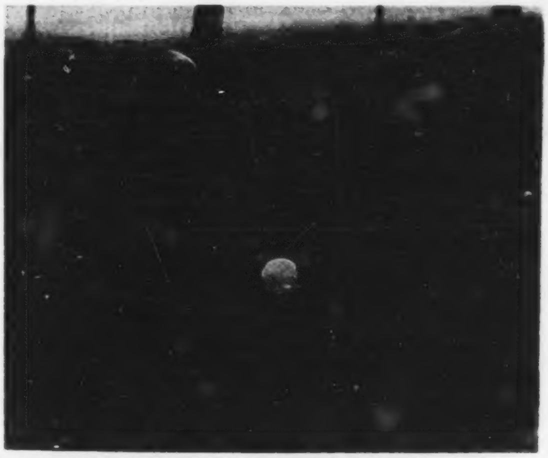
The Primary Physical Education Program

"Today the focus of contemporary physical education is on health-related fitness and the behavioral competencies and motor skills needed for lifelong engagement in healthy and satisfying physical activity" (Young, 1997). While physical fitness, movement skills, concept and affective development should be emphasized throughout the curriculum; the greatest emphasis during the preschool and early elementary grades should be upon movement acquisition (NASPE, 1992). Play is essential in the lives of children as it helps them master their environment and understand and cope with the world around them. Play is natural and spontaneous and allows children to discover themselves, their strengths and weaknesses, and their skills and interests. Play provides opportunities for each child to develop intellectually, physically, socially, and emotionally.

- *Enhance physical growth and development.*
  Heredity determines certain physical characteristics of the child. Other factors relating to nutrition, health, and environment affect physical growth and development. Scientific evidence indicates that normal healthy growth of bone, muscle, and other tissues of the body depend on adequate and continuous physical activity throughout the developmental years. Appropriate activities should be designed to meet the needs of all children, including those with special needs.

- *Develop attitudes, skills, and knowledge in a wide variety of motor skills.*
  Primary children display a range of physical abilities and energy levels. The teacher uses these characteristics to assist children in developing a variety of motor skills for active living. By providing a variety of experiences that include an appropriate range of activities such as playing, moving, and exploring, the teacher can enhance the development of muscle control, coordination, and body awareness within the child. Such a program stresses both functional and expressive movements that include activities from all areas of the physical education curriculum.

- *Promote physical fitness and well-being.*
  Opportunities should be provided for children to participate in activities that promote fitness and increase awareness of the need for fitness and well-being. The teacher fosters a positive attitude toward development of cardiovascular endurance, muscular endurance and strength, flexibility, and weight control. Activity, genetic endowment, and nutrition affect fitness levels in children. To maintain or increase fitness levels, provision should be made for children to participate in daily physical activity. The aim is to help children internalize the joy and feeling of well-being that exercise provides. Physical activity may then become a permanent part of their daily lives.



- *Enhance personal and social development.*
  Physical education provides the opportunity for children to learn appropriate behaviors in a variety of social settings. As children progress through a program in which they can test their tolerance, perseverance, and self-direction, they practice and learn the skills of communicating, cooperating, sharing, and trusting.

- *Foster intellectual growth.*
  The intellectual growth of children involves the cognitive skills of acquiring, ordering, and communicating knowledge and ideas. This leads to the ability to express ideas and feelings in a creative way through a variety of modes of expression. Physical education provides an effective medium in which young children exercise their thinking processes in active and inventive ways.

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Curriculum Content

Learning Dimensions

Dispositions

Physical education in the primary program provides children with opportunities to develop:

A. Awareness of physical activity as an enjoyable experience
  - Joy of movement
  - Skill competence and self-confidence
  - Aesthetics of movement

B. Awareness of physical activity as a social and cooperative experience
  - Cooperation
  - Leadership
  - Followership
  - Contribution to the group and sharing

C. Appreciation of each person's unique physical abilities
  - Respect for self
  - Respect for others
    - As individuals
    - In groups

D. Appreciation of quality and effort in the work of others
  - Encouragement
  - Praise
  - Acceptance

E. Responsibility for own behavior
  - Safety of others
  - Fair play
  - Etiquette
  - Respect for property

Skills

Physical education in the primary program provides children with opportunities to develop skills through participation in games, gymnastics, dance, and activities in alternative environments.

Games

The introduction of locomotor and manipulative skills as they relate to individual and group activities provides the essential motor skill development children will need in later years.

Locomotor Skills

- In general and personal space

Walking and Running

- Stopping and starting
- Dodging and darting
- Chasing and following

Additional Traveling

- Hopping, skipping, running, rolling, leaping, jumping, galloping, side-sliding

Jumping

- For distance
- For height (changing levels)
- With an implement

Manipulative Skills

Carrying (using body parts)

- With control

Sending and Receiving

- Sliding and retrieving
- Rolling and receiving
- Two hands
- One hand (left and right)
- Alternate hands

Ball Bouncing

- Two hands
- One hand (left and right)
- Alternate hands
- Stationary
- Moving
- Avoiding obstacles and others

Throwing (with accuracy)

- Underhand
  - Two hands
  - One hand
- Overhand
  - Two hands
  - One hand
- At a stationary target
- At a moving target
- Using an implement

Catching

- On the bounce and in the air
  - Two hands
  - One hand
  - While stationary
  - While moving

Throwing and Catching

- Passing
  - Two hands
  - One hand
  - Two people stationary
  - One person moving
  - Two or more people moving
- Using implements
  - Underhand
  - Overhand
  - At a target
  - Stationary

Striking (with accuracy)

- Using hand
  - One hand
  - Two hands
  - Alternate hands
  - Underhand
  - While stationary
  - While moving
- Using feet
  - Inside of foot
  - Outside of foot
  - Instep
  - Striking a stationary ball
  - Striking a moving ball
  - Dribbling
- Passing
  - Two people stationary
  - One person moving
  - Two or more people moving
- Trapping
  - Inside of foot
  - Sole of foot
  - Outside of foot
- Using implements
  - While holding object
  - A moving object
  - Continuous striking
  - Underhand
  - Sidearm

Gymnastics

Gymnastics in the primary program promotes the development of physical fitness and motor skills, while allowing children to participate successfully at their own level of ability.

Traveling

- Responding to stop and go
- Use of personal and general space
- Effort (heavy, light)
- Directions (forward, sideways, backward)
- Speed (fast, slow)
- Levels (high, medium, low)
- Pathways (straight, curved, zigzag, diagonal)
- Locomotor (walking, running, jumping, hopping, sliding)
- Shapes (stretch, curl, wide, narrow, twisted)

Relationships

- Individual sequence
- Partner and small group sequence
  - Following
  - Matching
  - Mirroring
- Small apparatus
- Large apparatus

Jumping and Landing

- Five basic jumps
- Using directions
- Using speeds

Rolling

- Different ways (log, safety)
- Directions
- Speeds
- Shapes

Sequencing

- Jump, land, roll
- Travel, jump, land, roll

Weight Bearing

- Using different body parts
- Levels
- Shapes
- Bridging
  - Individual
  - Partner
  - Small group
- Rolling and balancing
- Inverted balances

Transfer of Weight

- By step-like movements
- Using different body parts
- By rocking
- By rolling
- From feet to hands, hands to feet
- While changing levels
- While changing speeds
- By changing directions
- By changing shape

Dance

Dance in the primary program includes different forms including singing games, mime, rhythmics, creative/traditional folk and creative dance.

Rhythm
- Perceiving steady beat
- Locomotor
- Rhythmic patterns
- Accenting beats
- Perceiving phrases

Locomotor
- Walk, run, jump, hop, leap, side-slide, gallop, skip
- Step-touch
- Bleking (Mexican Hat Dance)

Pathways
- Straight
- Curved
- Zig-zag

Relationships
- Partner
- Small group
- Greeting
- Meeting, parting
- Turning, swinging

Formations
- Lines
- Circles
- Squares

Interpretive Movements
- Body awareness
  - Individual body parts
  - Shape
  - Balance
  - Transfer of weight
  - Gesture
- Space awareness
  - Direction
  - Level
  - Personal and general space
  - Pathways
- Qualities
  - Speed
  - Force (strong, light)
  - Time
  - Flow
- Relationships
  - Individual
  - Partner
  - Group
  - With objects
- Pantomime activities

Activities in Alternate Environments

Participation in a wide range of instructional and recreational activities will foster positive attitudes, skills, and knowledge necessary for a healthy, active life-style.

Aquatics

- Instructional swimming
  - Adjustment to water
  - Flotation
  - Propulsion
  - Jumps and dives
- Water safety
- Survival swimming
- Water games
- Cardiovascular endurance
- Muscular endurance
- Muscular strength
- Flexibility
- Nutrition

Outdoor Pursuits

- Camping
- Hiking
- Skiing (cross-country)

Community spaces

- Roller skating
- Ice skating
- Bowling

Knowledge

Physical education in the primary program provides children with opportunities to develop:

Understanding of safety

- Safety of self
- Safety of others
- Safety procedures/rules
- Safety techniques

Understanding of movement terminology

- Locomotor
- Manipulative
- Dance forms
- Gymnastic movements

Understanding of elements of movement

- Body awareness
- Space
- Qualities
- Relationships

Understanding of the creative process

- Perceives stimulus
- Discover/explore
- Select
- Combine
- Refine
- Perform

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Descriptors of Learning in Physical Education

Early Primary	Late Primary
Dispositions	
The child: ▪ Shows joy and excitement for moving ▪ Participates willingly ▪ Enjoys play ▪ Accepts diverse physical abilities of others ▪ Seeks teacher attention ▪ Accepts their own efforts	The child: ▪ Shows joy and excitement for moving ▪ Participates willingly in all activities ▪ Enjoys interactive play ▪ Cooperates in partner and small group activities ▪ Accepts diverse physical abilities of others ▪ Displays confidence in own ability ▪ Appreciates quality and effort in the works of others
Skills	
The child: ▪ Is developing space awareness ▪ Works individually ▪ Explores partner work and small group work ▪ Is developing large and small muscle control and coordination ▪ Demonstrates various locomotor and non-locomotor movements ▪ Combines movements into simple sequences ▪ Moves to simple rhythms ▪ Explores simple action words through movement ▪ Jumps and lands safely in a variety of ways ▪ Rotates in a variety of ways ▪ Balances using different body parts ▪ Develops individual sequences using gymnastic skills ▪ Explores gymnastics skills with small/large apparatus	The child: ▪ Demonstrates space awareness ▪ Works individually and independently ▪ Works effectively in partner and small group activities ▪ Is refining large and small muscle control and coordination ▪ Demonstrates proficiency in locomotor and non-locomotor movements ▪ Combines movements into complex sequences ▪ Applies problem-solving skills with greater frequency ▪ Moves to a variety of rhythms ▪ Expresses ideas and feeling through movement ▪ Incorporates jumps and landings into movement sequences ▪ Incorporates rotations into movement sequences

Descriptors of Learning in Physical Education

Early Primary	Late Primary
Skills (continued)	
The child:	The child:
	▪ Balances on different body parts
	▪ Incorporates gymnastic skills into movement sequences
	▪ Uses gymnastics with small/large apparatus
	▪ Slides and rolls objects at a target with accuracy
▪ Is developing hand-eye coordination	▪ Demonstrates hand-eye coordination using a variety of materials
▪ Creates individual games and play situations	▪ Creates partner and small group games and play situations
▪ Explores non-traditional activities, such as juggling, rhythmics	▪ Continues to explore a wide variety of non-traditional activities
▪ Explores activities in alternative environments	▪ Explores a wider variety of activities in alternative environments
▪ Shows awareness of multicultural activities	▪ Continues to explore multicultural activities
▪ Recognizes personal space and safety	▪ Recognizes and honors personal space and safety
Knowledge	
The child:	The child:
▪ Is aware of the importance of safety for self and others	▪ Demonstrates safety in relation to self and others
▪ Engages in appropriate behavior	▪ Practices appropriate behavior and fair play
▪ Is developing an awareness that games have rules	▪ Distinguishes between inventive and established rules for games
▪ Shows awareness of personal health and fitness	▪ Is beginning to take responsibility for personal health and fitness
▪ Recognizes basic movement terminology	▪ Communicates movement terminology
▪ Is exposed to careers related to physical education, health, and fitness	▪ Identifies and shows interest in careers related to physical education, health, and fitness

Health and Well-Being in the Primary Program

Common Understanding

Research has shown that poor health affects children's learning. The effects of poor health include cognitive and social/emotional deficits, low scores on developmental and achievement tests, and inattentiveness according to the American Public Health Association (APHA) and the American Academy of Pediatrics (AAP). It has also been discovered that many health risk behaviors that lead to heart diseases, some forms of cancer, and poor health are usually established during early childhood and persist into adulthood.

The position statement of the American Association for Health Education (AAHE) says: "Health education as both process and program, influences individual, family and societal development, knowledge, attitudes and behaviors...the concept of health embraces the entire being...the individual is a multi-dimensional entity, with each component—chemical, physical, spiritual, intellectual or emotional—existing as an element within a complex of interrelationships...good health requires positive efforts directed toward total well-being" (AAHE 1998).

National Health Education Standards

In 1995 National Health Education Standards were strongly suggested but not mandated by the AAHA and AAP. The following Standards for Kindergarten through Grade 4 can be used to define a health curriculum.

- Students will comprehend concepts related to health promotion and disease prevention.
- Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.
- Students will demonstrate the ability to use goal-setting and decision-making skills to enhance health.
- Students will demonstrate the ability to advocate for personal, family, and community health.
- Students will demonstrate the ability to access health information and health-promoting products and services.

The National Comprehensive Health Education (NCHE) organization suggests the adoption of comprehensive school health education programs that address these health topics:

- Alcohol and other drug use prevention
- Family and personal relationships
- Personal and consumer health
- Community and environmental health
- Nutrition and physical activity
- Unintentional and intentional injury prevention
- Growth and development
- Mental and emotional health

Comprehensive health education programs give students health knowledge and the ability to choose wellness behaviors and healthy relationships and to promote health, prevent illness and injury, and improve the quality of the environment (NCHE 1997).

What is already in place?

1. Many states including Iowa and Nebraska have mandatory K–12 physical education programs addressing the physical health needs of children.
2. The licensing standards/practices of Head Starts, child cares and preschools strongly address nutrition and safety of young children.
3. School lunch and breakfast programs are providing nutritional meals for children.

Children and Health: Implications for Primary Curriculum

Health education topics can be found in the curricular areas of science, math, social studies, physical education and responsible living thus suggesting that health education can truly be part of an integrated approach to curriculum

Curriculum integration is natural when addressing health education. Most of the health topics are or can be easily included in existing curriculums. These health topics include:

- Growth and Development
- Mental/Emotional Health
- Personal Health
- Family Life and Health
- Safety and First Aid
- Consumer Health
- Disease Prevention and Control
- Nutrition
- Community Health Management
- Drug Use and Abuse

Curriculum integration provides a natural framework for children to apply knowledge from multiple disciplines and to use this knowledge to solve real-life problems at work and at play.

Learning Dimensions in Health Education

"Health literacy is the capacity of individuals to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways which enhance health" (HealthTeacher.com).

No knowledge is more critical than knowledge about health. Without it, no other life goal can be successfully achieved.

The Carnegie Foundation Report, 1990

Because of the overlap and integration of processes most of the dispositions, skills and knowledge addressed under health education are also found in other curriculum areas.

Dispositions

- Develop dispositions of responsible citizenship (social studies)
- Respect and care for environment (social studies, science)
- Demonstrates safety measures (science)
- Importance of physical activity (physical education)

Skills

- Problem solving and decision making (social studies, responsible living, math, science)
- Locating, acquiring and organizing information (science, social studies, language arts)
- Measurement (science, math)
- Critical thinking (science, responsible living)
- Responsible choices (responsible living)
- Develop confidence, independence, and the motor skills associated with preparing nutritious foods

Knowledge

- Understand that there are a variety of foods that can help you grow and stay healthy
- Identify the food groups and identify a health benefit for each
- Shows awareness of personal health and fitness (physical education)

Possible Health Education Objectives for Early Primary

The following objectives have been compiled from the PreK–3rd grade health education curriculums of Health Teacher.com, GrowingHealthy, Chef Combo, and Pyramid Café (National Comprehensive Health Education, 1997; Health Teacher.com; Nutrition Explorations.org).

Growth and Development

Students will:
- Describe body parts
- Describe the kinds of information provided by each of the senses
- Describe the basic structure and functions of the human body system

Mental/Emotional Health

Students will:
- Identify acceptable ways to deal with unpleasant emotions
- Differentiate between acceptable and unacceptable behavior

Personal Health

Students will:
- Identify personal health practices that protect their health and the health of others
- Identify age appropriate responsibilities for health and safety

Safety and First Aid

Students will:
- Demonstrate first aid techniques for cuts and abrasions
- Practice behaviors which enhance personal safety

Nutrition

Students will:
- Describe the role of nutrition in a healthy lifestyle
- Identify the food groups and their purpose to healthy living

Drug Use and Abuse

Students will:
- Name methods of identifying potentially hazardous substances
- Demonstrate the ability to apply a decision-making process to health issues and problems

Disease Prevention and Control

Students will:
- Explain disease prevention practices
- Explain the value of immunizations

Consumer Health

Students will:
- Explain ways TV advertising influences choices of foods and other products
- Practice critical viewing skills of advertisements

Importance of Health Education

Health education is important and the earlier started the greater the positive lifelong results. Schools and early childhood programs are natural places to implement health education as they already play an important role in health promotion and disease prevention. In *Goal 2000: Educate America Act*, Goal One stated that "by 2000, all children in America will start school ready to learn." For this to happen it has been recognized that children need healthy minds and bodies. Federal and state funds has been used to establish programs to address this. Head Start and other child care and preschool programs have played active parts in health and nutrition endeavors.

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Web Sites

More and more web sites are being developed on the Internet. By searching healthy kids or children and health, you will have a multitude of hits to explore. Below are four such web sites.

www.californiahealthykids.org
This is a California Department of Education web site offers many links and resources including teacher developed lesson plans for health education K-3 and 4-6.

www.HealthTeacher.com
Developed and maintained by WebMD,Inc. provides a resource for state, district and local school systems, free of charge, everything needed to build a comprehensive sate of the art health education curriculum that is based on national standards.

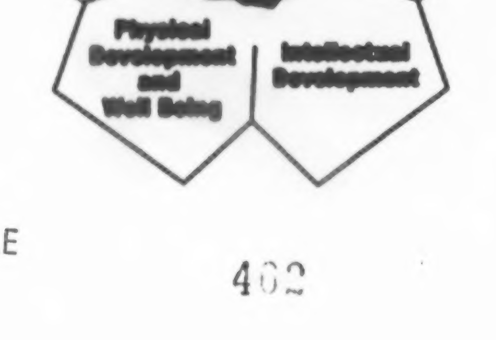
www.kidshealth.org
Provided by the medical experts of the Nemours Foundation offers information and interactive ideas for parents, kids and teens in the health areas of nutrition, fitness, smoking, dental, safety, and environment.

www.nutritionexplorations.org
Developed and maintained by the National Dairy Council this site offers multiple teaching resources for preschool and primary grades such as Chef Combo and Pyramid Cafe. Family nutrition information and family activities including kids cooking, games, stories and books are also found.

Development of Responsibility in The Primary Program

Social Studies 461

Responsible Living 473


Aesthetic
and
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Social Studies in the Primary Program

Common Understandings

Social studies in the primary program examines people in society as they interact with each other and with their many environments: physical, cultural, political, and socio-economic. Emphasis is placed on developing dispositions, skills, and knowledge through a variety of experiences that engage children in active learning. The introduction of significant and appropriate current events is an integral part of the curriculum at the primary level.

"Social studies themes are identified as the focus of work for extended periods of time. Social studies concepts are learned through a variety of projects and playful activities involving independent research in library books; excursions and interviewing visitors; discussions; the relevant use of language, writing, spelling (invented and teacher-taught), and reading skills; and opportunities to develop social skills such as planning, sharing, taking turns, and working in committees. The classroom is treated as a laboratory of social relations where children explore values and learn rules of social living and respect for individual differences through experience. Relevant art, music, dance, drama, wood working, and games are incorporated in social studies. Multicultural and nonsexist activities and materials are provided to enhance individual children's self-esteem and to enrich the lives of all children with respectful acceptance and appreciation of differences and similarities" (Bredekamp, 1991).

Curriculum Focus

The social studies curriculum at the primary level emphasizes:

- Developing attitudes which promote responsible citizenship and an appreciation of American culture, traditions, and heritage.

- A reorganization of the familiar content of self, family, community, and community interactions into three major concepts common to all aspects of the content of social studies curriculum:
    -Change
    -Structure
    -Interdependence

- Processes and skills of problem-solving, decision-making, interpreting maps and globes, and locating, acquiring, organizing, and evaluating information.

Each of these is more fully developed under the dimensions of dispositions, skills, and knowledge.

Integrating Curriculum

Social studies can be approached by using the familiar content of self, family, community, and interaction of communities to organize thematic learning experiences that include the development of dispositions, skills, and knowledge of the social studies curriculum or the larger concepts of structure, interdependence, and change. The teacher can weave the dispositions, skills, and knowledge of social studies into other thematic studies, language experiences, and the child's daily interactions in school and community.

The family, school, neighborhood, and community are content-rich workshops inviting exploration and inquiry. They invite children to generate, locate, acquire, and organize information through field trips and first hand experiences. They also invite children to represent knowledge in a variety of ways, in addition to communicating and representing orally and in writing. The content of social studies is also a familiar theme in many books and poems for primary children. Through language and literature, this content and the related concepts can also be introduced, developed, or expanded.

Learning Dimensions Through Social Studies

Dispositions

Learning experiences focusing on primary social studies provide children with opportunities to:
- Develop an interest and curiosity in the world
- Develop dispositions of responsible citizenship
- Value and respect similarities and differences among people
- Value, respect, and appreciate the variety of cultural identities and heritages in America and the world
- Respect and care for the environment

Learning experiences in the primary years provide many opportunities for teachers to help children develop an interest in and curiosity about the world and to demonstrate responsible behavior in the family, classroom, school, and community. Positive attitudes toward individuals, cultures, and the environment contribute to the development of personally and socially responsible people. Such dispositions, while not unique to social studies, are emphasized here because of their importance for the young learner. They also illustrate the integrated nature of curriculum throughout the primary program.

Skills

Many of the skills and processes of social studies are also integral components of other curricular areas. They are outlined here to show the degree of overlap and integration of processes and skills in the total primary program. For example:

- Problem-solving and decision-making are important thinking processes.
- Understanding time and chronology as components of the measurement strand in mathematics.
- Locating, acquiring, and organizing information through reading, listening, viewing, and communicating, both orally and in writing, are all components of language development.
- Citizenship skills, an integral component of the goals of social and emotional development and the development of responsibility, are also emphasized in the Responsible Living curriculum.

Learning experiences which focus on primary social studies provide children with opportunities to:

- Participate in problem-solving activities related to social studies content
- Participate in decision-making activities related to social studies content
- Interpret maps and globes
- Locate, organize, acquire, and evaluate information related to social studies content.

Knowledge

Social Units

A social unit can be defined as a group with members who have an ongoing relationship to one another. Examples of social units are the family, school, neighborhood, community, state, and nation. Further examples of social units include the classroom, a factory, an ant hill, a club, a political party, a farm, a wolf pack, a zoo, and an orchestra.

All of these social units can be studied in terms of structure, interdependence, and change. These concepts form the major organizing principles of the social studies curriculum. These concepts can be used by the teacher as vehicles to link social studies with other curriculum areas. For example, a study of the farm could include an investigation of its structure, its interdependence, and change, with these discoveries being related to the children's personal experiences with structure, interdependence, and change within the family, classroom, or community.

The examination of social units in the primary years should include a focus on the family, community, state, and the United States, with all learning continually being related to the child's own experiences.

The Importance of Self

Young children are interested in talking and learning about themselves and their experiences. Through focusing on themselves, children may explore:

- Uniqueness
- Personal needs
- Similarities with others
- Responsibilities
- Personal change

As their social world expands to include other children, young children show more interest in sharing and comparing information with their peers. Content in social studies should always include opportunities for both younger and older primary children to relate what they are learning to themselves and to their peers.

Structure of Social Units

Structure is anything arranged in a definite pattern or organization:

- Families can be studied in terms of their structure, size, and composition.
- Communities have a definite structure:
  - Physical–boundaries, roads, sewer systems, etc.
  - Social–neighborhoods, organizations, friendship patterns
  - Political–government (school, municipal, regional districts).
- America has a structure:
  - Physical-geography, boundaries
  - Social-national emblems such as the flag and anthem
  - Political-capitals, states, territories
- Other social units have a structure (for example, beehive):
  - Physical
  - Social (queen bee, drones, worker bees)

Children's study of the organization of their families, communities, and other social units enable them to recognize similarities and differences while broadening their understanding of these concepts. Through contrast and comparison, children's perspectives for viewing their own familiar social units (family, neighborhood, school, community) are broadened.

The following illustrates how structure might be examined in various social units familiar to the child:

All Families Have Structures

My Family	*Michael's Family*	*A Bear's Family*	*Cinderella's Family*
▪ Mom ▪ Dad ▪ 2 brothers ▪ 1 sister ▪ Grandma ▪ Me	▪ Dad ▪ 1 sister	▪ Mom ▪ 2 cubs	▪ Step mother ▪ 2 step sisters ▪ Cinderella

The Interdependence of Social Units

Social units interact with one another, satisfy one another's needs, and have roles and responsibilities.

Families can be studied in terms of the interdependence of their members:

- The needs of family members: food, shelter, clothing, love, safety, and recreation
- The roles and responsibilities of family members
- The interaction of family members: conflict and cooperation, rights and responsibilities, authority, and affection

Communities can be studied in terms of the interdependence of their members within their communities:

- The roles and responsibilities of community members including workers, volunteers, and citizens
- The provision of goods, safety and protection, education, health and social services, recreation, and aesthetic expressions
- Human interaction within the community including rights and responsibilities, friendship and affiliation, authority, cooperation, and conflict

Communities can also be studied in terms of their interaction with other communities and with the environment:

- The interaction of American communities through use of resources, government, transportation and communication, education, health and social services, recreation, and cultural expression

Other social units can be studied in terms of interdependence. For example, bees depend upon the beekeeper and the available flora which in turn is dependent upon climate and soil. These topics can be thoroughly developed and explored in the primary classroom with the study touching on all areas of the curriculum.

Change in Social Units

Families may be studied in terms of change in:

- Membership, location, structure, occupation, roles, and responsibilities

Communities may be studied in terms of:

- The changes in a community over time (historical)
- Interaction and, change within the physical environment
- Projected change for the future

Other social units (bees) may be studied in terms of:

- Changes over time (summer/winter)
- Interaction (roles)

Change in Social Units

My Community Changes	*My Family's Activities Change*	*A Deer Family Changes*
During Fall...		
Corn matures	Harvest corn	Eat corn left in fields
Trees lose leaves	Rake leaves	May be hunted
Birds, ducks, geese, cranes migrate	Prepare garden for winter	Move to wintering area
	Hunt	
During Winter...		
Snow	Sledding	Sleep in thick, wooded areas
Ice	Play indoors	Look for food
Cold		
During Spring...		
Warmer weather	Fly kites	Fawns are born
Rain	Softball/baseball	Roam outdoors
Wind	Play outdoors	Food is easier to find
Plants grow	Plant garden	
During Summer...		
Heat	Swim	Eat plants
No school	Vacation	Raise young

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Descriptors of Learning in Social Studies

Early Primary	Later Primary
Dispositions	
The child:	The child:
	▪ Recognizes cultural similarities and differences
▪ Recognizes the ways in which all people are alike	▪ Understands that differences in people do not change the ways in which we are all alike
▪ Accepts responsibility for her/his behavior	▪ Accepts responsibility for her/his behavior and anticipates consequences of actions
▪ Participates in a wide variety of activities	▪ Participates in a wide variety of activities
▪ Demonstrates responsible behavior in caring for the school environment	▪ Understands and demonstrates responsible behavior with respect to a healthier environment
▪ Responds with interest to exploration of the school and community environments	▪ Demonstrates an interest in and curiosity about an expanding world environment

Descriptors of Learning in Social Studies

Early Primary	Later Primary
Skills	
The child:	The child:
▪ Identifies a problem or issue	▪ Identifies possible solutions or answers
▪ Locates and acquires information through: – Print sources – Pictorial sources – Real-life interactions	▪ Locates and acquires information through: – Print sources – Pictorial sources – Real-life interactions – Technology and media sources
▪ Organizes information through a variety of concrete presentations	▪ Organizes information through a variety of concrete and symbolic representations at increasingly complex levels
▪ Evaluates whether information is fiction or non-fiction	▪ Evaluates whether information is fact or opinion
▪ Compares objects, pictures, and ideas using concrete attributes	▪ Compares objects, pictures, and ideas using a larger variety of concrete and abstract attributes
	▪ Locates and represents specific information on maps and globes

Descriptors of Learning in Social Studies

Early Primary	Later Primary
Knowledge	
Self as the Fundamental Social Unit	
The child: ▪ Identifies own unique characteristics ▪ Recognizes own personal needs: physical, emotional, social, and intellectual ▪ Accept appropriate responsibility for own actions ▪ Identifies important personal changes: physical, emotional, social, and intellectual	The child: ▪ Recognizes similarities and differences among people ▪ Understands that all people have similar needs ▪ Demonstrates ability to interact cooperatively with others ▪ Develops the ability to cope with and control personal change
Structure of Social Units	
The child: ▪ Investigates various social units ▪ Investigates structure of social units	The child: ▪ Understands connections among various social units ▪ Compares and contrasts structures of differing social units

Descriptors of Learning in Social Studies

Early Primary	Later Primary
Knowledge	
Interdependence of Social Units	
The child: ▪ Recognizes that members of a social unit satisfy one another's needs ▪ Recognizes that members of a social unit have different roles	The child: ▪ Understands that members of a social unit have different degrees of responsibility for satisfying needs ▪ Compares similarities in roles among social units
Change in Social Units	
The child: ▪ Recognizes that all social units change over time ▪ Recognizes that changes in a social unit affect its members	The child: ▪ Investigates how social units change, makes predictions about change ▪ Recognizes that changes in a social unit affects its members in different ways

Responsible Living in the Primary Program

Common Understandings

Children who are allowed to make their own choices grow to see themselves as independent persons who can influence the environment in which they live. They learn to see themselves as persons of worth.

Wasserman, 1990

- A variety of health and safety projects (for example, nutrition, dental health, hand washing) are designed to help children learn many personalized facts about health and safety; to integrate their learning into their daily habits; to plan and to dictate and/or write their plans; to draw and write about these activities; to read silently and aloud; and to enjoy learning because it is related to their lives.
- Teachers promote prosocial behavior, perseverance, industry, and independence by providing many stimulating, motivating activities; encouraging individual choices; allowing as much time as needed for children to complete work; and ensuring moments of private time alone with the teacher or with a close friend.
- Children have many opportunities daily to develop social skills such as helping, cooperating, negotiating, and talking with the person involved to solve interpersonal problems. Teachers facilitate the development of social skills at all times as a part of the curriculum.
- Teachers promote the development of children's consciences and self-control through positive guidance techniques including: setting clear limits in a positive manner; involving children in establishing rules for classroom living and problem-solving of misbehavior; redirecting children to an acceptable activity; and meeting with an individual child who is having problems or with children and their parents. Teachers maintain their perspective about misbehavior, recognizing that every infraction does not warrant attention and identifying those that can be used as learning opportunities.

Rationale

Children and Personal Development

The goals of primary education are to further the intellectual, human, social, and personal development of children. Schools must provide opportunities for children to deal not only with subjects that are academically and culturally important, but also with subjects that are personally significant.

Therefore, the curriculum must address the physical, emotional, intellectual, social, and spiritual dimensions of human development.

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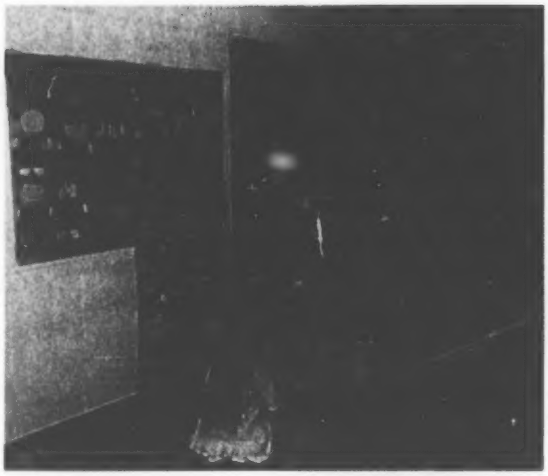

Children and Change

In today's world, children must be able to deal effectively with change. The composition of society and the nature of the family itself are being fundamentally altered. Dramatic changes are also occurring in the workplace as we more fully enter the "information age." Further, we are witnessing an unprecedented expansion in the number and type of entertainment and recreation options open to people of all ages. Although these changes have some positive effects (proliferation of opportunities), they also have negative effects (social break down and individual alienation).

Therefore, the curriculum must provide opportunities for children to reflect on, discuss, and predict the likely consequences of change as well as to develop and formulate strategies required for adapting to change.

Children and Responsible Decision-Making

Children increasingly need to develop appropriate attitude/dispositions and acquire skills and knowledge necessary to make responsible, informed choices so they can lead empowered, purposeful, and fulfilled lives. They also need to develop attitudes that allow them to take advantage of new opportunities and, at the same time, deal confidently with the stresses of uncertainty and change.

Therefore, the curriculum must provide age appropriate opportunities for children to practice solving problems of day-to-day life through the use of decision-making processes that involve thinking about predicting and evaluating the likely consequences of particular decisions.

Children and Responsible Choices

To the extent that health is a matter of learning and making informed choices, this program's focus on physical, emotional, intellectual, social, and spiritual health can benefit children enormously. Health education is effective in helping children develop and maintain health-enhancing habits when it is begun early in life and experiences at critical learning periods. There is no doubt healthy children are more ready to learn and more likely to enjoy learning. Adopting positive health practices can reduce the incidence and severity of illness and injury.

Therefore, the curriculum must provide opportunities for children to evaluate the short-term and long-term benefits of their healthful decisions. It must also provide opportunities for them to assess their own decisions and adopt attitudes and personal habits that are conducive to health.

Curriculum Overview

The responsible living curriculum deals with the physical, emotional, intellectual, social, and personal dimensions of human development in terms of issues that are personally relevant for children. In doing so, the curriculum integrates concepts and content from a variety of curriculum areas including health education, physical education, family and consumer science and guidance. The curriculum also includes materials that address contemporary issues facing children. Connections to topics in the traditional subject areas of social studies (the changing nature of social roles), language arts (communication skills), and science (reproductive biology) are also evident throughout the curriculum. The curriculum has been designed to help teachers maintain, reinforce, and enhance those skills, attitudes, and behaviors that enable children to increase control over and improve their personal well-being. This process involves:

- Care of self (the decisions and actions children take in the interest of their own health and well-being)
- Care of others (the attitudes children form and the actions they take to support one another and help each other to cope and grow)
- Care of the environment (the creation of conditions and surroundings that are conducive to health and well-being)

It also should be recognized that the inclusion in the curriculum of topics dealing with physical fitness does not reduce the need for children to actually engage in regular physical activity in order to maintain or improve their fitness levels. The school's physical education program and the responsible living curriculum are intended to be mutually supportive.

The Teacher and the Responsible Living Curriculum

The role of the teacher is to facilitate student learning. In particular, the teacher:

- Plans and creates, in collaboration with children, a safe environment which encourages the exploration of ideas
- Examines his or her personal understanding of sensitive topics outlined in the curriculum content
- Develops his or her understanding of personal attitudes and beliefs, especially in those areas where the teacher's opinions may block class discussions
- Works in partnership with colleagues, parents, and others in the community to support and reinforce the objectives of the curriculum
- Continues to be open to new ideas and new teaching methods which will facilitate the implementation of the curriculum
- Responds to children's personal concerns
- Recognizes personal limitations and reaches out for help when a student is potentially at risk

Parents and the Responsible Living Curriculum

The family is the primary role model in the development of children's attitudes and values. The school plays a supportive role by focusing on achievement of the objectives outlined in the responsible living curriculum. In order that the partnership between home and school be maintained, it is important that parents be kept informed about all aspects of the responsible living curriculum by:

- Exchanging information with the classroom teacher
- Attending orientation meetings and workshop presentations
- Participating in lesson activities
- Reinforcing and supporting the goals of curriculum

The Healthy School Environment

The health and well-being of children directly affects the health of the community. Similarly, the health of the community through its involvement in the commitment to health and well-being of children has a direct impact on the school. Parent and community involvement in health matters can provide support and reinforcement for the school-based curriculum. By drawing upon the energy, skills, and creativity of community members, programs can be developed to provide effective and meaningful support for the responsible living curriculum. A healthy community environment is a cooperative and caring one enabling children to meet basic needs in times of crisis and periods of development.

Services for Children

Services offered to children reinforce the preventive aspects of the curriculum and provide support and intervention to those at risk or in crisis. Services may include screening, assessment, in-class support, placement, counseling, first-aid, immunization, treatment, and disease surveillance. A school-based team can play a vital role in coordinating the efficient delivery of services by school and other personnel as well as ensuring that appropriate referrals are made.

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Learning Through the Responsible Living Curriculum

Principles

- The responsible living curriculum should promote growth in children's use of appropriate decision-making and problem-solving strategies in personal, family, social, and educational settings.
- The responsible living curriculum should promote growth in children' knowledge that is relevant to personal family and social settings.
- The responsible living curriculum should promote growth in children's reflective understanding about their own thinking and decision-making processes. Children should become increasingly able to select and apply skills and knowledge appropriately in personal, family, and social settings.
- The responsible living curriculum should promote growth in children's ability to respect differences.
- The responsible living curriculum should promote growth in children' positive self-concept.

Curriculum Content

In terms of organization, the curriculum is built around four major concepts:

1. Individual awareness and responsibility
2. Relationships
3. Social awareness and responsibility
4. Lifelong development

In considering these concepts, it is important to keep in mind that they are interdependent, and no one is more important than the other. A common thread running through all four is decision-making.

Individual Awareness and Responsibility

- Children should grow in their ability to identify and develop their sense of self. Opportunities are provided for children to:
  - Become aware of their physical, emotional, intellectual, moral/ethical, and spiritual self
  - Create a process to analytically assess and develop their sense of self
  - Describe how their sense of self may change
- Children should grow in the courage to see themselves as people who need to love and to be loved. Opportunities should be provided for children to:
  - Appreciate what is involved in becoming a thinking, caring, loving person
  - Appreciate the importance of love
  - Expand and affirm personal concepts of giving and receiving love

- Children should grow in self-confidence and experience, increased motivation to achieve personal growth. Opportunities are provided for children to:
  - Assess their levels of self-confidence and motivation to achieve personal growth
  - Value a positive sense of self
  - Formulate and implement a plan for enhancing their self-worth, self-confidence, self-esteem, and personal motivation
  - Reflect upon the role of love in the development of self-worth
  - Take steps to realize their personal potential
  - Reflect upon and assess specific personal attributes

- Children should grow in the ability to recognize problems, to generate and evaluate alternative solutions, to reach conclusions, and to take action. Opportunities are provided for children to:
  - Appreciate the need for problem-solving
  - Understand decision-making processes
  - Solve everyday problems through the use of decision-making processes
  - Demonstrate the ability to think creatively and critically in decision-making
  - Understand the relationship between decisions, actions, and consequences

- Children should grow in their ability to identify and develop responsibility for their own behavior and decisions. Opportunities are provided for children to:
  - Develop a growing sense of personal responsibility
  - Relate personal/family values and moral beliefs to personal decisions

Relationships

- Children should grow in the understanding of the nature of human relationships. Opportunities are provided for children to:
  - Understand what constitutes a relationship
  - Examine the need to form and maintain friendships
  - Explore the positive and negative aspects of friendships
  - Develop an understanding of family structures
  - Understand the functions of families (for example, protection, security, nurture, support)
  - Appreciate the role and influence of the family as a social institution
  - Demonstrate an awareness of personal roles within relationships
  - Understand the varying ways that families function
  - Understand the rights and responsibility within family, peer, and occupational relationships

- Children should grow in an understanding of how relationships develop and change. Opportunities are provided for children to:
  - Examine the ways families grow and change
  - Explore the ways in which relationships grow and change
  - Appreciate the need for responsibility in relationships

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  - Build an awareness of growth and change in the individual
  - Understand how rights and responsibilities affect family, peer, and occupational relationships

- Children should grow in the ability to communicate with other individuals, to develop healthy relationships, and behave in responsible, caring ways. Opportunities are provided for children to:
  - Develop effective interpersonal communication skills
  - Understand that people have different attitudes, values, and beliefs
  - Appreciate that each individual's perceptions and expressions are unique
  - Develop conflict resolution abilities
  - Appreciate the role of cooperation and competition in relationships
  - Acquire an appreciation for what is involved in initiating and maintaining healthy relationships
  - Apply effective communication skills in discussing differences in attitudes and beliefs

Social Awareness and Responsibility

- Children should grow in the understanding of family and societal expectations. Opportunities should be provided for children to:
  - Appreciate how family roles, family expectations, and societal expectations influence behaviors
  - Understand how prejudices, stereotypical views, attitudes, and behaviors influence the rights and goals of others

- Children should grow in the understanding of their rights and responsibilities as persons who are both independent of and interdependent with others in society. Opportunities are provided to:
  - Develop an appreciation for personal and societal rights and responsibilities
  - Understand and develop an attitude of intolerance toward unfair, irresponsible, exploitative, and abusive behaviors
  - Avoid becoming the object of exploitative and abusive behaviors or the victim of irresponsible behaviors
  - Develop the ability to cooperate and work together for the benefit of the larger group
  - Analyze and evaluate membership in social groups
  - Appreciate the impact of the environment on health as well as the contribution individuals and groups make to a healthful environment

- Children should grow in an understanding of the diverse nature of society. Opportunities are provided for children to:
  - Understand the extent of American social diversity
  - Appreciate the variety of opportunities present in a diverse society

Lifelong Development

- Children should grow in the development of attitudes and skills which promote health. Opportunities are provided for children to:
  - Demonstrate an awareness of factors that influence an individual's health, the health of others, and the health of the environment
  - Develop and maintain a variety of good health habits
  - Appreciate healthful life-styles

- Children should grow in appreciation for being a lifelong learner. Opportunities are provided to:
  - Understand the concept of lifelong learning in terms that are personally relevant
  - Develop a more sophisticated perspective on their present knowledge, attitudes, and behaviors

- Children should grow in the ability to access information. Opportunities are provided for children to:
  - Develop information-gathering skills
  - Understand how to evaluate prior knowledge and access new information sources

- Children should grow in the understanding of support services. Opportunities are provided for children to:
  - Develop an awareness of kinds of support available in the family, school, and community
  - Obtain needed assistance from a variety of support services.

- Children should grow in the ability to set attainable goals for themselves. Opportunities are provided for children to:
  - Understand and appreciate the importance of goal-setting and follow-through

- Children should grow in the development of skills which enable them to adapt to and/or effect change. Opportunities are provided for children to:
  - Understand the significance of change
  - Become more aware of changes they experience in their personal lives
  - Maintain or enhance their ability to manage and adapt to change
  - Understand the continual process of human development and the impact of development on physical and emotional change.

- Children should grow in the awareness of diverse career pathways and honoring healthy work ethics.
  - Knowledge of diversity of work settings
  - Develop career awareness skills
  - Appreciate work ethic

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Descriptors of Learning in Responsible Living

Early Primary	Later Primary
Individual Awareness and Responsibility	
Dispositions… ▪ The child demonstrates self-awareness: – Represents self (drawings, journals, orally) ▪ The child demonstrates personal growth in self-confidence and motivation: – Applies previous knowledge to new situations – Expresses own point of view – Responds positively to encouragement	**Dispositions…** ▪ The child demonstrates self awareness: – Describes self in a positive, realistic manner – Accepts and plays a variety of roles ▪ The child demonstrates personal growth in self-confidence and motivation: – Adapts to new situations with confidence – Expresses and defends own personal view – Responds positively to encouragement and considers input from others
Skills… ▪ The child demonstrates the ability to persevere and solve problems: – Recognizes when a problem exists – Asks for help when necessary – Identifies alternate solutions – Recognizes the consequences of actions	**Skills…** ▪ The child demonstrates the ability to persevere and solve problems: – Recognizes when a problem arises – Seeks appropriate resources for help – Solves problems using a variety of strategies – Recognizes the consequences of decisions
Knowledge… ▪ The child demonstrates an understanding that everyone needs to give and receive love: – Demonstrates an awareness of situations in which individuals show caring or loving behavior ▪ The child shows responsibility for his own behavior and decisions: – Accepts responsibility for own behavior – Acts responsibly in a variety of situations	**Knowledge…** ▪ The child demonstrates an understanding that everyone needs to give and receive love: – Demonstrates respect and consideration for self and others.

Descriptors of Learning in Responsible Living

Early Primary	Later Primary
Relationships	
Dispositions… ▪ The child demonstrates compassion, empathy, honesty, and respect in dealing with others: – Shows awareness of need for compassion, empathy, honesty, and respect in dealing with others	**Dispositions…** ▪ The child demonstrates compassion, empathy, honesty, and respect in dealing with others: – Behaves in a compassionate, empathetic, honest, and respectful manner in dealing with others
Skills… ▪ The child practices effective communication skills: – Expresses thoughts, feelings, and opinions in appropriate ways – Listens attentively to others' points of view – Responds appropriately in a variety of social situations	**Skills…** ▪ The child practices effective communication skills: – Expresses thoughts, feelings, and opinions in appropriate ways – Understands the role and impact of non-verbal communication – Listens attentively and considers others' points of view – Responds appropriately in a variety of social situations
Knowledge… ▪ The child demonstrates an understanding of the nature of human relationships and how they develop and change: – Identifies different types of relationships (e.g., peer, family, other)	**Knowledge…** ▪ The child demonstrates an understanding of the nature of human relationships and how they develop and change – Initiates new relationships and maintains positive, existing relationships

Descriptors of Learning in Responsible Living

Early Primary	Later Primary
Social Awareness and Responsibility	
Dispositions and Skills… ▪ The child demonstrates a respect for personal and societal rights and responsibilities: – Demonstrates an understanding of the purpose of rules – Identifies and applies safety rules in a variety of everyday situations – Participates cooperatively in social groups – Recognizes own uniqueness	**Dispositions and Skills…** ▪ The child demonstrates a respect for personal and societal rights and responsibilities: – Demonstrates social responsibility in caring for personal and public property and the environment – Identifies and applies safety rules in a variety of everyday situations – Accepts and assumes a variety of roles within social settings – Demonstrates an awareness of and respect for the similarities and differences among individual and among groups
Knowledge… ▪ The child demonstrates an awareness that irresponsible, abusive, and exploitative behaviors are intolerable – Identifies and reports irresponsible, abusive, and exploitative behaviors	**Knowledge…** ▪ The child demonstrates an awareness that irresponsible, abusive, and exploitative behaviors are not to be tolerated – Identifies options for dealing with a problematic, dangerous, or unsafe situation (refusing, reporting, and leaving situation)
▪ The child understands how family roles and societal expectations influence behaviors: – Is becoming aware of social rules – Demonstrates awareness of how peers and family affect interests and choices	▪ The child understands how family roles and societal expectations influence behaviors: – Identifies and applies social rules in a variety of situations – Demonstrates awareness of how the community and the media affect interests and choices – Explores how significant social figures influence personal goals and choices (historical figures, role models, fictional characters)

Descriptors of Learning in Responsible Living

Early Primary	Later Primary
Lifelong Development	
Dispositions... ▪ The child shows care and concern for others in need or crisis ▪ The child demonstrates respect for the health of self, the health of others, and the environment ▪ The child appreciates personal goal attainment: – Sets attainable, short-term personal goals – Experiences satisfaction in attaining goals	**Dispositions...** ▪ The child shows care and concern for others in need or crisis ▪ The child recognizes the connection between a healthy environment and human health ▪ The child appreciates personal goal attainment: – Identifies and follows specific steps to achieve short-term goals – Experiences satisfaction in attaining goals ▪ The child appreciates a balance of family, social, work, and school
Skills ... ▪ The child practices good health and safety habits (nutrition, fitness, hygiene, recreational activities ▪ The child understands and adjusts to change: – Demonstrates an awareness of changes within self and in the environment	**Skills ...** ▪ The child practices good health and safety habits (nutrition, fitness, hygiene, recreational activities) ▪ The child understands and adjusts to change: – Identifies opportunities for personal growth with relation to change (for example, moving provides opportunities for new experiences and friendships) – Adjusts to new situations and experiences and applies problem-solving strategies
Knowledge ... ▪ The child identifies a variety of information sources	**Knowledge ...** ▪ The child evaluates a variety of information sources ▪ The child develops strategies for accessing reliable information and support systems ▪ Career awareness

The Primary Program

Assessment and Evaluation

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Assessment Plans and Activities:
A Teacher's Self-Evaluation

Am I focusing on the learner and the learning (rather than on what has been learned)?

- Are my assessment practices helping me to be a "better" teacher—to work more effectively in enhancing student's development (rather than satisfying external, system-monitoring requirements)?
- Are my assessment activities meaningful to the students and contextualized within my classroom community (rather than trivial, artificial tasks)?
- Does what I am doing make sense to students, parents, and to me (rather than involving mysterious rituals and results that only experts can interpret)?
- Is assessment a dynamic, integral part of all classroom activities (rather than something that happens at the "end" when the learning is over)?
- Is assessment a shared collaborative activity in a community of discovery (rather than the sole right and responsibility of the teacher)?

From S. Jeroski, *Learner-focused Assessment: Helping Students Grow,* 1992.

Assessment and Evaluation in the Primary Program

Common Understandings

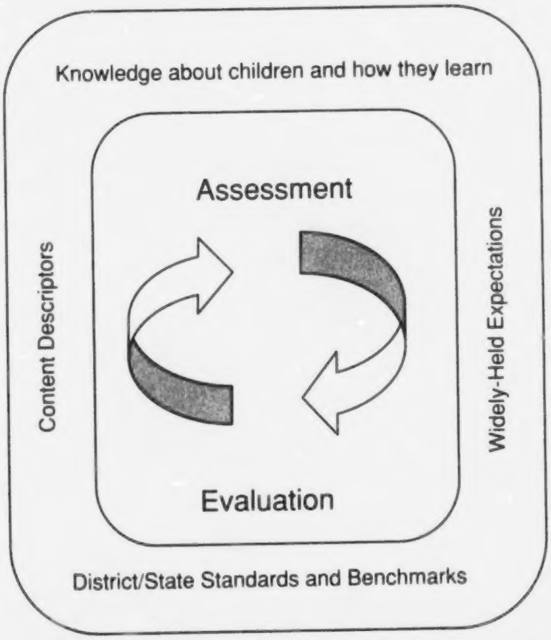
"Assessment" and "evaluation" are terms often used interchangeably. In the Primary Program, a distinction is made between the two terms. Assessment is the process of gathering evidence of what a child can do. Evaluation is the process of interpreting that evidence and making judgments and decisions based on that evidence. The quality of information gained through assessment determines the quality of evaluation; that is, evaluation is only as good as the assessment on which it is based.

Assessment and evaluation are one process (see Figure 1). In the context of the classroom, teachers carry out both parts of that process, often almost simultaneously. For example, a teacher's observations of a child and conference with that child (assessment) may lead to an immediate decision (evaluation) about instruction. For the purposes of the Primary Program, we use the terms assessment and evaluation together, reflecting the integrated nature of the process.

> *Good teaching is inseparable from good assessing.*
>
> Wiggins, 1989

Figure 1

The Continuous Process of Assessment and Evaluation


Knowledge about children and how they learn
Assessment
Content Descriptors
Widely-Held Expectations
Evaluation
District/State Standards and Benchmarks

Assessment

Assessment is the systematic process of gathering evidence of what a child can do. Assessment techniques are authentic, continuous, and free from cultural, gender, and linguistic biases. In the school environment, assessment begins in the classroom. Assessment techniques occur in the context of the classroom environment; they mirror the actual learning experiences in the classroom; and they are carried on in an unobtrusive manner. Observing children, conferencing, and examining multiple samples of children's representations of their learning, provide the evidence upon which to plan learning experiences appropriate for each child.

Throughout the assessment process, the teacher shares information and interpretations and invites active participation from children and parents. The teacher views assessment as an integral part of instruction. The children see assessment as another learning experience.

Evaluation

Evaluation is the ongoing process of making judgments and decisions based on the interpretation of evidence gathered through assessment. The purposes of evaluation are to make informed instructional decisions and to provide a basis for reporting progress to the child, to parents, and to school personnel.

Evaluation is based on learning demonstrated by the child in relation to the goals of the Primary Program, Widely-Held Expectations, curriculum expectations, district standards and benchmarks, and the descriptors of children's learning. Descriptors and Widely-Held Expectations, reflecting the range of growth throughout the primary years, help the teacher describe children's learning in developmental terms. Evaluation assists the teacher in adjusting instruction to enhance and extend learning, while supporting learners by providing information on their achievements. For students with special needs, evaluations must be considered and routinely reviewed by the teacher.

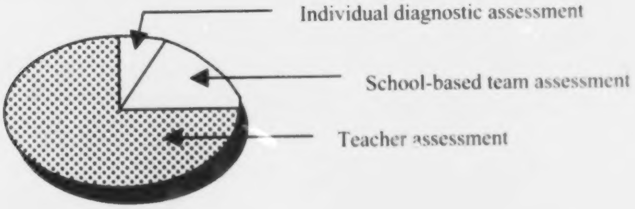
Self-evaluation and reflection assist children in becoming independent and autonomous learners. Teachers nurture the process of self-evaluation as they guide children to be reflective and as they help children recognize their accomplishments and identify their learning needs. With repeated opportunities to evaluate their work, children understand the significance of self-evaluation as a tool for lifelong learning.

Collaborative Efforts—Assessment and Evaluation for All Children

> *Assessment demonstrates children's overall strengths and progress, what children can do, not just their wrong answers or what they cannot do or know.*
>
> National Association for the Education of Young Children & National Association of Early Childhood Specialists in State Departments of Education, 1991

Even after extensive ongoing classroom assessment and evaluation, the teacher may still have unanswered questions about some children. In such instances, the teacher and a school-based student assistance team collaborate to collect further information for a problem-solving meeting. For some children, this may indicate the need for more diagnostic assessment completed by a multidisciplinary team which includes the classroom teacher and qualified specialists. For children qualifying for special education services, the team then develops an individual plan for learning. The student assistance team may also need to address concerns raised by the assessment and evaluation process itself. If "high stakes" decisions (labeling, grouping, tracking, retaining, placement) are going to be made, safeguards are necessary to assure appropriate decisions and actions are taken. Schools and programs need to work to make sure that assessment and instructional practices are aligned with developmental characteristics and needs.

Assessment of Children



When assessment procedures are carried out by professionals other than classroom teachers, the teacher continues to have prime responsibility for both the child and for continuing classroom instruction and assessment. The chart above provides an approximation of the appropriate proportion of various forms of assessment.

Classroom Assessment

In the primary classroom, knowing what to do and how to support children's learning requires the teacher to be informed about children's strengths, needs, and the skills and knowledge required for that grade level. Teachers need to know about children's progress and difficulties in learning so they can make instructional decisions that benefit the children. Good teaching and ongoing assessment are strongly linked to student success.

Classroom assessment consists of a variety of methods of assessment that provide information to both the teacher and the child that helps to monitor and document children's progress over time. This is necessary to insure that instruction is responsive and appropriately matched to what children are and are not able to do. It also allows for teachers to customize instruction to meet individual needs or to identify children who might benefit from more intensive or specialized instruction (Neuman, Copple, & Bredekamp, 2000).

Classroom assessment for all students should be:

- Aligned to instructional goals
- An integral, enriching part of learning and instruction
- Student-centered
- Reflective of individual needs and cultural influences
- Non-threatening and motivating
- On-going to provide ample opportunities for success
- Aimed at development of self-assessment skills
- Communicated to a variety of audiences

(Nebraska Department of Education, 1999)

> *The time has come to fundamentally rethink the relationship between assessment and effective schooling. This reevaluation must center not on how we assess student achievement but on how we use assessment in pursuit of student success.*
>
> Stiggins, 1999

Linking Assessment and Instruction

Accurate and effective assessment of children's knowledge, skills, and attitudes in content areas helps a teacher more accurately match instructional strategies with how and what the children are learning. Both formal and informal assessments are necessary to gain a complete picture of each child's strengths and areas of need. The assessment decision-making model that appears later in this section shows how this process can occur in the classroom.

Effective assessment makes it possible for teachers to:

- Monitor and document children's progress over time
- Ensure that instruction is responsive and appropriately matched to what children are and are not able to do
- Customize instruction to meet individual children's strengths and needs
- Enable children to observe their own growth and development
- Identify children who might benefit from more intensive levels of instruction, such as individual tutoring, or other interventions (Neuman, Copple, & Bredekamp, 2000)

Learning is an interactive, complex and multifaceted process that requires a variety of instructional strategies and approaches. While the child is the one actually engaged in the construction of knowledge, it is critical that teachers and parents maintain a supportive and instructive role in the process (Snow, Burns, & Griffin, 1998, and Neuman, Copple, & Bredekamp, 2000). Support for children can range from direct or explicit instruction to exploration opportunities where they interact with meaningful, relevant, and engaging materials. Instruction is based on careful selection of teaching and learning strategies that match the needs of individual or groups of children with specific skills being taught.

Large-Scale Assessment

Large-scale assessments are standardized tests or other forms of assessment that are designed to be administered to a large group of children at the same time. These assessments are administered under prescribed conditions to provide information about performance so that results for buildings, districts, states, or nations can be fairly compared. These norm-referenced or criterion-referenced assessments are often intended for purposes of comparing and sorting children and for decision-making at the instructional support or policy levels.

A Look at Classroom Assessment and Large-scale Assessment

Classroom Assessment		Large-scale Assessment
Instructional decision-making Child, classroom, or instructional issues Match instructional practices Measures how students learn, as well as, what students know/have learned	**Purpose**	Accountability Child placement or system issues Match norms or criterion Measures what students know/have learned
On-going Objective and/or subjective Comparability less important than making instructional decisions Greater variety of methods	**Method**	One time, infrequent Tend to be objectively scored Comparability critical across classrooms A few very efficient methods
Traits that change over time Skills and knowledge within the context of classroom curriculum and instruction	**Content**	Traits that are stable over time Skills and knowledge abstracted from classroom context
May or may not be standard for all in the classroom	**Administration**	Standard for all
Scores, descriptions, judgments, profiles Immediate feedback	**Results**	Scores Delayed feedback
Teachers, students, parents	**Audience**	Policy-makers, administrators, teachers, parents
Data collector, interpreter, and user	**Role of Assessor**	Uninvolved data collector
Positive impact on student learning Defined by each teacher	**Meaning of Quality**	Technical standards of validity and reliability Defined by assessment field

Adapted from works by:
Morrow, L. M. (1997). *Literacy development in the early years*, (3^{rd} ed.). Needham Heights, NJ: Allyn & Bacon.
Stiggins, R. J. (1997). *Student-centered classroom assessment (2^{nd} ed.).* Upper Saddle, NJ: Merrill
Stiggins, R. J. (1998). *Professional development in classroom assessment: Learning team training guide for study of student-centered classroom assessment.* Portland, OR: Assessment Training Institute.
Stiggins, R. J. (1999). Personal communication.

Purposes of Assessment and Evaluation

The purpose of assessment and evaluation is to support and enhance the child's learning. Thoughtful, sensitive, accurate, supportive assessment and evaluation are prerequisites for learning. They are crucial in enhancing children's growth and development. They are fundamental to the success of the primary program. Assessments and evaluations are used to make decisions about the learning process **of every child** on a continuous basis.

Assessing and teaching are inseparable and intertwined processes. As part of the teaching-learning process, effective assessment will:

- Gather evidence on what a child can do, determining individual strengths and learning needs
- Help the teacher make informed instructional decisions, set learning goals, and shape a curriculum based on the strengths and needs of the child
- Provide feedback to the child
- Help the child develop and value the practice of assessing and evaluating his or her own learning
- Promote the child's growth and development in all goal areas of the program
- Provide a basis for communicating progress to the child, to the parents, to school personnel, and to the community
- Nurture and develop a positive self-concept in the child
- Enable the learner and promote lifelong learning

Teachers nurture the process of self-evaluation as they guide children to be reflective and as they help children recognize their accomplishments and identify their learning needs. With repeated opportunities to evaluate their work, children understand the significance of self-evaluation as a tool for lifelong learning.

In 1998, the Goal I Early Childhood Assessments Resource Group included the following information and recommendations in their report that was submitted to The National Goals Panel (pp. 6–7, 35–36):

> **Important Purposes of Assessment for Young Children**
> The intended use of an assessment—its purpose—determines every other aspect of how the assessment is conducted. Purpose determines the content of the assessment (What should be measured?); methods of data collection (Should the procedures be standardized? Can data come from the child, the parent, or the teacher?); technical requirements of the assessment (What level of reliability and validity must be established?); and, finally, the stakes or consequences of the assessment, which in turn determine the kinds of safeguards necessary to protect against potential harm from fallible assessment-based decisions.

There should be no high-stakes accountability testing of individual children before the end of third grade.

Goal I Early Childhood
Assessments Resource
Group, 1998

For example, if data from a statewide assessment are going to be used for school accountability, then it is important that data be collected in a standardized way to ensure comparability of school results. If children in some schools are given practice ahead of time so that they will be familiar with the task formats, then children in all schools should be provided with the same practice; teachers should not give help during the assessment or restate the questions unless it is part of the standard administration to do so; and all of the assessments should be administered in approximately the same week of the school year.

In contrast, when a teacher is working with an individual child in a classroom trying to help that child learn, assessments almost always occur in the context of activities and tasks that are already familiar, so practice or task familiarity is not at issue. In the classroom context, teachers may well provide help while assessing to take advantage of the learning opportunity and to figure out exactly how a child is thinking by seeing what kind of help makes it possible to take the next steps. For teaching and learning purposes, the timing of assessments makes the most sense if they occur on an ongoing basis as particular skills and content are being learned. Good classroom assessment is disciplined, not haphazard, and, with training, teachers expectations can reflect common standards. Nonetheless, assessments devised by teachers as part of the learning process lack the uniformity and the standardization that is necessary to ensure comparability, essential for accountability purposes.

Similarly, the technical standards for reliability and validity are much more stringent for high-stakes accountability assessment than for informal assessments used by individual caregivers and teachers to help children learn. The consequences of accountability assessments are much greater, so the instruments used must be sufficiently accurate to ensure that important decisions about a child are not made as the result of measurement error. In addition, accountability assessments are usually "one-shot,"" stand-alone events. In contrast, caregivers and teachers are constantly collecting information over long periods of time and do not make high-stakes decisions. If they are wrong one day about what a child knows or is able to do, then the error is easily remedied the next day.

Serious misuses of testing with young children occur when assessments intended for one purpose are used inappropriately for other purposes. For example, the content of IQ measures intended to identify children for special education is not appropriate content to use in planning instruction. At the same time, assessments designed for instructional planning may not have sufficient validity and technical accuracy to support high-stakes decisions.

An appropriate assessment system may include different assessments for different categories of purpose, such as:

- assessments to support learning,
- assessments for identification of special needs,
- assessments for program evaluation and monitoring trends, and
- assessments for high-stakes accountability.

Conclusions

Assessment of young children is important both to support the learning of each individual child and to provide data—at the district, state, and national level—for improving services and educational programs. At the level of the individual child, teaching and assessment are closely linked. Finding out, on an ongoing basis, what a child knows and can do, helps parents and teachers decide how to pose new challenges and provide help with what the child has not yet mastered. Teachers also use a combination of observation and formal assessments to evaluate their own teaching and make improvements. At the policy level, data are needed about the preconditions of learning—such as the adequacy of health care, child care, and preschool services. Direct measures of children's early learning are also needed to make sure that educational programs are on track in helping students reach high standards by the end of third grade.

Assessing young children accurately is much more difficult than for older students and adults, because of the nature of early learning and because the language skills needed to participate in formal assessments are still developing. Inappropriate testing of young children has sometimes led to unfair and harmful decisions. Such testing abuses occur primarily for one of two reasons: either a test designed for one purpose is improperly used for another purpose, or testing procedures appropriate for older children are used inappropriately with younger children. In making its recommendations, the Resource Group has emphasized how technical requirements for assessments must be tailored to each assessment purpose, and we have tried to explain how the increasing reliability and validity of measurement for ages from birth to age 8 should guide decisions about what kinds of assessments can be administered accurately at each age.

Four categories of assessment purpose were identified, with accompanying recommendations for educators and policymakers:

1. Assessing to promote children's learning and development. The most important reason for assessing young children is to help them learn. To this end, assessments should be closely tied to preschool and early grades curriculum, and should be a natural part of instructional activities. Policymakers should support the development or provision of assessment materials, to be used instructionally, that exemplify important and age appropriate learning goals. States should also support professional development to help teachers learn to use benchmark information to extend children's thinking.

2. Assessing to identify children for health and special services. Screening or a referral procedure should be in place to ensure that children suspected of having a health or learning problem are referred for in-depth evaluation. Given the potential for misuse of cognitive screening measures, states that mandate screening tests should monitor how they are used and should take extra steps to avoid inappropriate uses. IQ–like tests should not be used to exclude children from school or to plan instruction. Often, the need for costly assessments could be eliminated if intensive language and literacy programs were more broadly available for all of the groups deemed educationally at-risk, e.g., children living in poverty, children with mild cognitive and language disabilities, and children with early reading difficulties.

> *Ultimately, our goal is to set high expectations for early learning and development, to make sure that no child who falls behind goes unnoticed, and at the same time to help parents and the public understand how varied are the successful paths of early learning, depending on the rate of development, linguistic and cultural experiences, and community contexts.*
>
> Goal 1 Early Childhood
> Assessments Resource
> Group, 1998

3. Assessing to monitor trends and evaluate programs and services. The kinds of assessment that teachers use in preschool and the early grades to monitor children's learning are not sufficiently reliable or directly comparable for uses outside the classroom. Before age 5, assessment systems designed to gather data at the state or national level should focus on social indicators that describe the conditions of learning, e.g., the percentage of low-income children who attend quality preschool programs. Beginning at age 5, it is possible to develop large-scale assessment systems to report on trends in early learning, but matrix sampling should be used to ensure technical accuracy and at the same time protect individual children from test misuse.

4. Assessing academic achievement to hold individual students, teachers, and schools accountable. *There should be no high-stakes accountability testing of individual children before the end of third grade.* This very strong recommendation does not imply that members of the Resource Group are against accountability or against high standards. In fact, instructionally relevant assessments designed to support student learning should reflect a clear continuum of progress in Grades K, 1, and 2 that leads to expected standards of performance for the third and fourth grades. Teachers should be accountable for keeping track of how well their students are learning and for responding appropriately, but the technology of testing is not sufficiently accurate to impose these decisions using an outside assessment.

Ultimately, our goal is to set high expectations for early learning and development, to make sure that no child who falls behind goes unnoticed, and at the same time to help parents and the public understand how varied are the successful paths of early learning, depending on the rate of development, linguistic and cultural experiences, and community contexts.

Adapted: Shepard, L.; Kagan, S. L. & Wurtz, E., (Eds.). (1998). *Principles and recommendations for early childhood assessments.* Washington, DC: National Education Goals Panel.

Principles of Assessment and Evaluation

Assessment and evaluation that support and enhance children's learning and teachers' decision-making are based on a number of important principles. The following general principles should guide decisions, policies, and practices when assessing young children.

Benefits for the Learner

The learner should be at the heart of all assessment practices. Assessment and evaluation should benefit the learner either in direct services to be provided or in improved quality of educational programs and instructional strategies.

- **A classroom assessment and evaluation program is primarily concerned with enabling the learner.** Children can and do improve. An effective assessment and evaluation program focuses on identifying what children can do and documenting evidence that children are developing and improving.

- **An effective assessment and evaluation program is constructive.** Assessment and evaluation support and enhance learning and development by focusing on what they are attempting to do. Assessment and evaluation do not focus on deficits or negative aspects.

Students can hit any target they can see that holds still for them.

Stiggins, 1999

- **Assessment and evaluation facilitate the transfer of learning.** When children are encouraged to reflect on and evaluate their own learning, they gain understanding of the processes they have used. As they develop this metacognitive awareness, they are able to achieve control of the strategies and skills they have practices and to deliberately use these in new situations. Similarly, when teachers reflect on and evaluate various aspects of a learning experience, they gain important insights which they can apply to new learning activities.

- **Assessment and evaluation support the learner's risk-taking.** Assessment and evaluation look not only at what a child can do, but also at what the child is trying to do. The development of oral communication is a dynamic process. It requires that the child become aware of particular skills or strategies and seek new ways and opportunities to use them. Through use, the child gains insights, begins to formulate generalizations, and internalizes what he or she has learned. The process is one of experimentation and of repeated trial and error. Obviously, this can only take place in an environment that supports risk-taking, one that allows and recognizes errors and corrections as part of the development process.

Considerations, Forms, and Methods

Young children learn at different rates and in different ways than do older students and adults. Assessment and evaluation programs must be tailored accordingly.

- **Assessments and evaluations should be tailored to a specific purpose and should be reliable, valid, and fair for that purpose.** Assessments and evaluations designed for one purpose or grade level are not necessarily valid if used for other purposes or grade levels. Procedures and policies may need to be developed to ensure that assessment practices lead to results that are accurate and useful for the given purpose.

- **Assessments should be age-appropriate in both content and the method(s) of data collection.** Assessments should address the full range of learning and developmental areas, including language, cognition, physical health and well-being, motor skills, social and emotional, general knowledge, and approaches to learning. Methods of assessment should recognize that children often need familiar contexts in order to fully demonstrate their skills and abilities. Sometimes the teacher may need to rely on alternatives to paper-and-pencil tasks for accurate data.

> *Assessment avoids approaches that place children in artificial situations, impede the usual learning and developmental experiences in the classroom, or divert children from their natural learning processes.*
>
> National Association for the Education of Young Children & National Association of Early Childhood Specialists in State Departments of Education, 1991

- **Assessment and evaluation are current and free of cultural, gender, and linguistic bias.** To ensure that evaluation procedures are fair for all children, the teacher chooses procedures and instruments that do not place any child or group of children at a disadvantage. The teacher sensitively and thoughtfully adapts and modifies procedures as required in order to accommodate children's cultural backgrounds, life experiences, and facility with the language of instruction. Similarly, assessment and evaluation allow for equal opportunities for both boys and girls.

- **Assessment and evaluation are subjective.** All assessment and evaluation procedures involve making judgments. A judgment is subjective, and making judgments is a subjective process. The very process of choosing which assessment tool to use is, in itself, subjective. However, judgments are more reliable when they are based on multiple authentic evidence. The teacher, therefore, interprets judgments cautiously and interprets them in the context of his or her knowledge of the individual child, of the learning situation, and of the process of learning in general.

- **Effective assessment and evaluation are comprehensive.** Assessment and evaluation focus on all the goals of the program, not just those which can be easily and objectively assessed. While it is often difficult to evaluate, for example, the development of attitudes and values (to work cooperatively with others), or the development of higher order, more complex skills and behaviors (skill in facilitating group problem-solving), these are nevertheless given appropriate emphasis. It is better to make a tentative, subjective decision about an important goal or stage of development (ability to select a suitable chapter book), than an absolute, objective judgment about a trivial one (spelling "calendar" correctly).

- **Effective decision-making is based on systematic opportunities to observe children and their learning in a supportive environment.** To demonstrate what the teacher wishes to assess and evaluate, children must engage in specific tasks and activities where they display the attitudes, skills and knowledge a teacher wishes to find out about. A child can best do this in an environment that is encouraging and supportive. To make valid judgments about any aspect of a child's development, the teacher, therefore, ensures that assessment elicits from a child whatever it is the teacher wishes to find out about and that this takes place in an appropriate climate.

Users and Uses

Effective assessment and evaluation of learning relies upon gathering data from multiple sources in varied formats. Teachers look beyond a single performance or outcome and ask how, why, and when the child is doing something or behaving in a particular way. The child is also encouraged to reflect on their own learning, considering both the processes used and the product completed.

- **Assessment and evaluation encourage the child to have an important role to play in monitoring his or her own learning and development.** Assessment and evaluation are not something that is done to students. The process recognizes learners as active participants in their own learning and in the evaluation of that learning. The teacher helps to make learning activities purposeful by sharing expectations with children and encouraging them to reflect on their own growth.

- **Parents should be a valued source of assessment information, as well as an audience for assessment results.** Because of the fallibility of direct measures of young children, assessments should include multiple sources of evidence, especially reports from parents and teachers. Assessment results should be shared with parents as part of an ongoing process that involves parents in their child's education.

- **The teacher selects assessment and evaluation procedures and instruments in the light of program goals, curricular expectations, learning opportunities, and classroom practices.** The context of the learning situation determines the appropriateness of any particular assessment and evaluation technique or instrument. Assessment and evaluation are integrated with instruction; children have systematic opportunities to develop those learnings which are the focus of assessment and evaluation.

- **Assessment and evaluation are an integral part of instructional decision-making. In this process, the teacher is the major instructional decision-maker.** Assessment and evaluation imply that, somewhere along the child's learning path, certain judgments and decisions are made. Values are implicit in this process. Teachers cannot distance themselves from these judgments and decisions, nor should they. No one other than the classroom teacher has the range or depth of information about the child's classroom learning and performance. However, as classroom teachers collaborate with other professionals, they gain additional information and valuable guidance. The insights acquired through such consultation assist the teacher with instructional decision-making. In the last analysis, the classroom teacher maintains the prime responsibility for assessment and evaluation of the children in the classroom.

- **Assessment and evaluation imply that, at some time, decisions will be made and some action will follow.** Assessment and evaluation are purposeful: information is collected, interpreted, and synthesized in order to enhance the teacher's and children's decision-making. Obtaining information about a particular aspect of learning or a particular component of the program implies that, at some time in the future, some course of action will follow. The teacher does not have time to gather information which is not useful in terms of the learning situation. The teacher continually asks, "What will I do when I find out X?"

- **Assessment and evaluation are based on multiple observations.** In order to make decisions or judgments about any aspect of learning, the teacher observes the representation of that learning a number of times in a number of contexts. On any one single occasion, in any one given situation (working alone rather than working with a partner), or through any one medium of representation (writing rather than oral presentation), a child's behavior may not be a valid indication of learning. The teacher obtains a more accurate and more complete picture of the child's learning by collecting multiple, diverse evidence of student accomplishments.

Supporting Learning: Assessment/Evaluation/Reporting

In the primary program

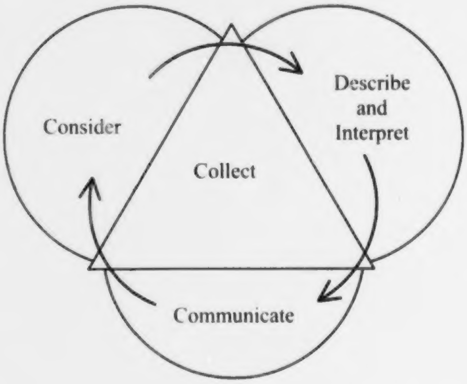
We used to...	*but...*	*So now...*	*because...*
Place more emphasis on what children could not or should not do	We learned this focus undermined the confidence of many children, and we could be more supportive of their accomplishments.	We begin with what children can do, then consider their learning needs.	This helps them to develop confidence and gives a foundation for building and further refining skills and knowledge.
Fail children who did not meet pre-set expectations for behavior or ability to do tasks	We found that some children doubted their ability to learn and this increased the probability of their dropping out of school.	Teachers give children the support needed to allow them to make continuous progress.	This maintains their self-esteem and confidence, the prompting of further learning strengthening the disposition to learn.
Use pencil-and-paper tasks as the main way of assessing and evaluating children	We now know this gave a limited view of what children could do.	We encourage children to represent their learning in a variety of ways (show what they know).	This provides opportunities for more children to demonstrate their intelligence and to be successful learners.
Compare learners to each other	This made comparisons more important than the actual learning.	Each learner is evaluated on what he or she can do in relation to the Widely-Held Expectations and skills are continually refined.	This helps each child feel valued as a learner and builds on individual strengths, which encourages a good start toward lifelong learning.
Use checklists for children's report cards	They gave limited information about what children could do.	We use information from observations, conferences, and collections of children's work to develop anecdotal reports.	They give more comprehensive information about what children can do.
Use letter grades for reporting children's progress (A, B, C, G, S, NI)	Letter grades were dependent on teacher and parent interpretation and often focused on surface knowledge rather than understanding.	We use anecdotal reports to describe children's learning.	They give a more detailed picture of what children can do and identify future learning goals.
Exclude children from the assessment and evaluation process	This did not encourage the development of self-evaluation skills.	Children are encouraged to take a more active role in assessing and evaluating their own progress and with the help of the teacher, set future learning goals.	As children construct meaning of the world around them, this process encourages self-evaluation, independent learning, and a commitment to further learning.
Plan conferences for parents and teachers to exchange information	This often overlooked the people with the most relevant information—the children as developing learners.	Teachers are beginning to plan ways to include children in the conference with parents.	Together they can develop a shared understanding of children's abilities, interests and learning needs, resulting in the setting of realistic learning goals.

A Decision-Making Model for Assessment and Evaluation

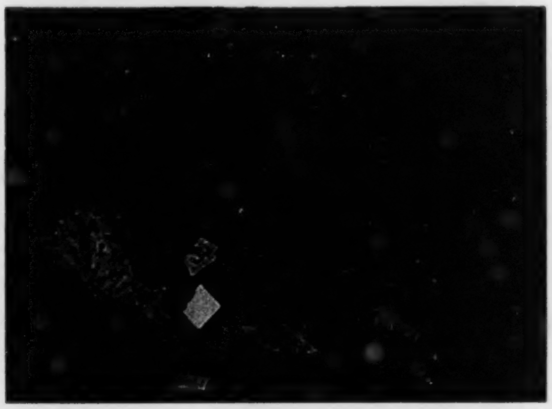
> *Too often students' progress and teachers' performance are measured only by students' performance on standardized exams.... This practice can unnecessarily label some students as failures and place undue pressure on teachers to 'teach to the tests' to ensure high scores by their students. In at least some cases, performance-based assessments that call upon students to write, make oral presentations, and work with other students to solve real world problems may provide richer pictures of student's ability and progress.*
>
> National Commission on Children, 1991

Assessment is the process of gathering evidence of what a child can do. Evaluation is the process of making decisions about information gained through assessment (see Figure 2).

Figure 2
A Decision-Making Model



Assessment and evaluation are enabling when the teacher helps the child to identify what he or she can do and when the teacher collaborates with the child to set future goals in the light of learning needs. Assessment and evaluation provide the information and direction vital to the teaching-learning process.



> *Our decisions about learning, teaching, assessment and evaluation must be congruent. We cannot espouse and implement one philosophy of learning and teaching, and evaluate from a totally different perspective.*
>
> Anthony, Johnson, Mickelson, & Preece, 1989

In the learning environment, the process of assessment and evaluation is embedded in classroom instruction: curriculum, assessment, and evaluation are continuous. The teacher carries out most assessment through naturally occurring classroom events. (If the evidence cannot be collected in a natural setting, the teacher may need to structure situations where specific behaviors may be observed. Such situations still need to reflect appropriate classroom practice.) Evaluation is carried out in a constructive manner so children view it as a learning experience building a foundation for self-evaluation.

The Primary Program model of assessment and evaluation is a decision-making model. It is based on knowledge about children and how they learn. The evaluation cycle (consider, collect, describe, interpret and communicate) enables the teacher to report the child's achievements to the child, to parents, and to school personnel.

The decision-making model outlines procedures to facilitate ongoing assessment and evaluation. Some factors teachers consider as they use this model are:

- Knowledge about children and how they learn as the guide for all decisions
- Decisions at all stages of the process:
  - Who and what needs to be considered?
  - What and how do we collect evidence?
  - How can we describe what the child can do?
  - What patterns emerge from interpreting the evidence?
  - Who needs this information?

The assessment process is not a linear one. At any point during the process, the teacher may decide to continue or to go back to a previous stage and refocus or redirect the process. For example, after collecting some evidence, the teacher may use this information to describe what the child can do, or the teacher may decide to reevaluate the original question and consider a new one.

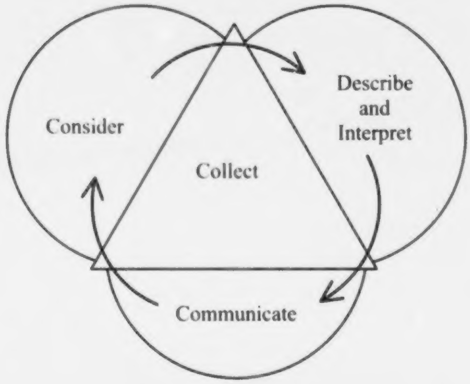
- Communication with the child occurs throughout the process. Information may also be shared, informally or formally, with parents and school personnel at any time throughout the process.
- Collection of evidence occurs in the context of the learning environment and is related to the curricular expectations and primary program goals.

Consider…

Where do we begin?

- Who will be assessed and why?
- Who are all the participants in this assessment, (children, peers, parents, teachers, school personnel)?
- What will be assessed? What curriculum goal area?
- What assessment strategies will be used?
- Where will the assessment take place (classroom, playground, gym)?
- When will the assessment occur (during center time, in the course of writers' workshop)?
- How is the information to be collected? How is it to be recorded? How is it to be stored?

The Decision Making Model



Collect…

How can the information be found?
(See Collecting Assessment Evidence)

Observation of process:
Is it possible to observe the child interacting with peers, adults, and materials; in a variety of activities and contexts; and in the process of demonstrating what he or she knows?

Observation of product:
What representations of a child's thinking can be collected (drawings, paintings, writings, block construction, maps, graphics, charts, webs, projects, computer products, and other samples)?

Conversations and conferences:
What insights can the child contribute into his or her own learning?

What questions can the teacher ask to probe thinking?

Describe and Interpret...

On the basis of evidence collected, what can the child do? (Refer to Goals of the Primary Program, Widely-Held Expectations, State/district standards, and Descriptions of Learning in this section.)

- Have the child's past achievements and developmental characteristics been adequately considered?
- What is the significant evidence? Does more evidence need to be collected?
- What patterns emerge?
- What does the information tell us about a child's learning?
- Does the child need special accommodations and support?

Good teachers have always been kidwatchers. The concept of kidwatching is not new. It grows out of the child study movements that reached a peak in the 1930s providing a great deal of knowledge about human growth and development. Teachers can translate child study into its most universal form: learning about children by watching how they learn.

Goodman, 1996

Communication to the child, parent, and community...

Communication is a shared partnership intended to support a child's continued success in school.

Communication should consider:

- What the child can do
- The child's interests and attitudes
- The child's learning needs
- Plans for how the teacher and family can support or assist the child's learning.

How will we communicate this information?

- What is the most appropriate method of communicating this information (conversations, conferences, portfolios, reports)?
- With whom does this information need to be shared?
- Is there a plan in place for feedback or reflection after the information has been communicated?

Collecting Assessment Evidence

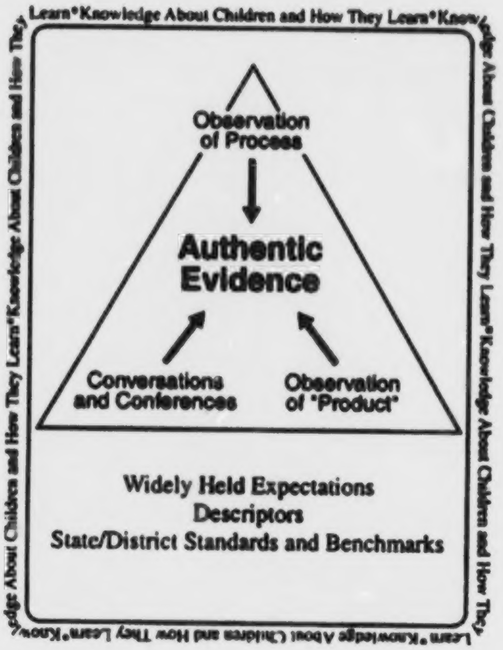
Children need to represent their thinking and learning in some way before the teacher can find out what they think or know or can do: this is the evidence for their learning. For purposes of assessment and evaluation, the teacher's task is to:

- Elicit this evidence from children
- Examine children's representations
- Collect and document over a period of time

The teacher does this by observing children, by talking and conferring with them, and by looking at the products children create (see Figure 3).

Figure 3
Collecting Authentic Evidence

> *Performance assessments, paper and pencil tests, and assessments based on personal communication all have a place in an educational system that values widely disparate outcomes. Our challenge is to align our various assessment options with the broad array of achievement targets we value.*
>
> Stiggins, 1991


Learn•Knowledge About Children and How They Learn•Knowledge About Children and How They Learn•Knowledge About Children and How They
Observation of Process
Authentic Evidence
Conversations and Conferences
Observation of "Product"
Widely Held Expectations
Descriptors
State/District Standards and Benchmarks

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If it is to be meaningful and if it is to have worth and significance, the assessment evidence collected from children must be authentic. Authentic evidence is evidence that predominantly:

- Is selected in terms of program goals and learning experiences
- Reflects the regular conditions of the classroom
- Documents growth in children's actual "products" rather than on work substitutes in contrived tasks
- Reflects some kind of real-life purpose, meaning, or validity.

Examples of Authentic and Not Authentic Evidence

Authentic	Not Authentic
▪ At the end of the term, each child writes a thank you letter to a favorite classroom visitor or volunteer.	▪ Every child writes a thank you letter which follows certain rules and submits it to the teacher.
▪ Over a period of a few weeks, every child has an opportunity to give a brief, informal book talk on a recent favorite book to a small group.	▪ Each child reads an assigned book and writes a book report.
▪ In the course of a reading conference, a child selects a favorite passage to read aloud to the teacher from a book she or he is currently reading.	▪ Each child reads aloud from a reader in a round-robin reading group.

Hypotheses drawn from any one source represent a partial view, tentative judgments may be confirmed or rejected by synthesizing the web of information considered as a whole. The result is a multidimensional conceptualization of students' literacy learning in a variety of contexts and situations.

Chapman, 1989

Using the Assessment Information

Assessment information is used to:

- Plan for instruction
- Provide a baseline for learning documentation
- Chart growth using developmental checklists
- Measure progress on district or state standards
- Match and evaluate program goals with child's needs
- Help a child advance a skill
- Provide feedback on teaching methods and curriculum
- Learn about the child's family/culture
- Share progress with parents

> *Do we judge our students to be deficient in writing, speaking, listening, artistic creation, finding and citing evidence, and problem-solving? Then let the tests ask them to write, speak, listen, create, do original research, and solve problems.*
>
> Wiggins, 1989

Assessment and the Unique Development of Young Children

Assessing children in the earliest years of life—from birth to age eight—is difficult because it is the period when young children's rates of physical, motor, and linguistic development outpace growth rates at all other stages. Growth is rapid, episodic, and highly influenced by environmental supports: nurturing parents, quality caregiving, and the learning setting.

Because young children learn in ways and at rates different from older children and adults, we must tailor our assessments accordingly. Because young children come to know things through listening, and because they often represent their knowledge better by showing than by talking or writing, paper-and-pencil tests are not adequate. Because young children do not have the experience to understand what the goals of formal testing are, testing interactions may be very difficult or impossible to structure appropriately. Because young children develop and learn so fast, tests given at one point in time may not give a complete picture of learning. And because young children's achievements at any point are the result of a complex mix of their ability to learn and past learning opportunities, it is a mistake to interpret measure of past learning as evidence of what could be learned.

For these reasons, how we assess young children and the principles that frame such assessment need special attention. What works for older children or adults will not work for younger children; they have unique needs that we, as adults, are obliged to recognize if we are to optimize their development.

Source: Goal 1 Early Childhood Assessment Resource Group. (1998). *Principles and recommendations for early childhood assessments.* Washington, DC: National Education Goals Panel. p 3–4. (Shepard, Kagan & Wurtz-Eds.)

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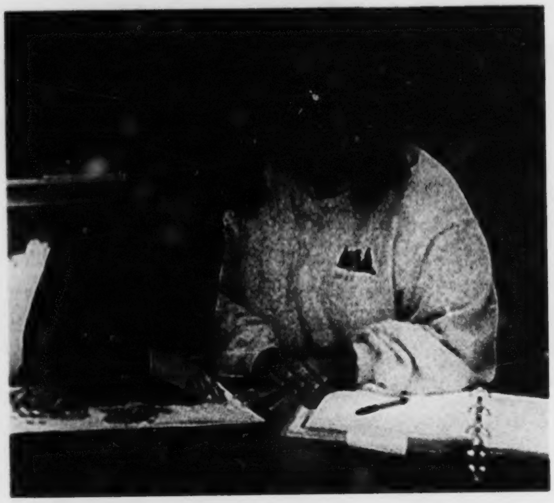
Understanding the Collection of Authentic Evidence: How We Find Out What a Child Can Do?



Teachers find out what children know and can do by watching them in action, looking at collections of their work, and talking with them. When teachers collect and record this information over time, they develop a picture of each child's growth and learning progress. This authentic evidence provides teachers with information to make decisions about ways to best support and challenge further learning for each child.

Teachers' interpretations of the evidence and decisions about instruction are based on understanding how children grow and learn. Research-based knowledge about child development and learning, combined with the collective wisdom and common sense of parents and teachers, is essential for knowing how to evaluate and plan for learning in meaningful ways.

Widely-Held Expectations

In the Primary Program, "Widely-Held Expectations" provide a big picture of children's growth and development over time in each of the goal areas plus reading, writing, and mathematics. The Widely-Held Expectations, based on research about child development and learning, provide general *criteria* for what to look for or measure in children's growth and learning in the identified areas. Assessment and evaluation are the *processes* for measuring growth and learning progress. The Widely-Held Expectations, and other research-based developmental guidelines, help teachers to think about ways to support learning that is achievable and challenging. In addition, these guidelines provide developmental context to support higher levels of learning for each child as teachers address standards and benchmarks established at local and state levels.

Collecting Evidence

Authentic evidence is collected through teachers' observational notes, samples of children's work, and interactions with children and their families. In addition to watching and listening, observation involves skills in focused documentation to effectively relate what children can do. Samples of children's work are collected and organized in portfolios to demonstrate progress over time. Through conversations and conferences with children and parents, teachers have opportunities to exchange information and increase their understanding of children and their families.

To ensure validity and reliability, the teacher uses a variety of sources to assess children's progress. These, described in the following pages, include:

- Observing children involved in the learning process
- Looking at the products children make
- Engaging children in conversations and conferences

Collecting Authentic Evidence Through Observation of Process: Watching Children in Action
Observation is an important and comprehensive means of assessing and evaluating all behavior and learning in the classroom. By observing children thoughtfully, sensitively, and systematically within the natural setting of the classroom, the teacher:

- Learns about children.
- Begins to identify each child's unique interests, personality, learning style, strengths, differences, and learning needs.
- Uses this information to plan programs that best meet the needs of every student in the class.

Sometimes observation is the only way to assess and evaluate in the classroom. Examples range from children's emotions and feelings, to children's interactions with one another, to a variety of characteristics or traits such as curiosity and creativity. All these and others are understood and appraised only through observation.

It is the classroom teacher who is in the best position to make sensitive, accurate, and comprehensive observations of children. It is the classroom teacher who can best collect evidence of children's learning and growth over time, document it, and interpret it. It is the classroom teacher, ultimately, who best knows the children in his or her class.

Consider this scenario. The children are playing and learning in the classroom. You are totally involved with the children, attending to their needs and what they say and do. In the course of your day with the children, you notice things; you also remember some of them. Much of this process of noticing and remembering may have been unconscious; it just happened naturally. Later, you may even recall a number of things and you may reflect on them. Through your reflection, you make assumptions, you hypothesize and make interpretations about the data you have collected. You have been naturally and unconsciously observing the children and intuitively using your knowledge and understanding about children's development and the curriculum to assess the growth and development of each child. All of this is important and valuable.

> *Kid watchers are teachers who interact with students and who monitor class activities in order to understand more about teaching and learning, mostly learning.*
>
> Goodman, 1989

Important and valuable though it is, this informal process needs to be complemented by observation that is more conscious, more focused, more articulated: a process of observing, recording, and reflecting that is more thorough and comprehensive.

Observation Process

When do teachers observe?
In the course of the normal day, teachers watch children as they participate with them. Teachers generally do not step out of action to observe. Observation is an ongoing and natural process that occurs in the midst of daily routines throughout the school year (Dichtelmiller, et al., 1994).

Teachers record observations of children in action and review them on a regular basis to discover patterns, assess progress, and make plans to continue their learning. Specific tasks are structured to develop a base of information about each child and chart their progress over time.

Observations may occur when children are:
- Working alone, with a partner, in groups, with adults, or with children of varying ages
- Participating in all kinds of activities, including art, drama, dance, music, movement, project work
- Exploring materials, toys, tools, equipment
- Completing specific tasks
- In transitions or during free time

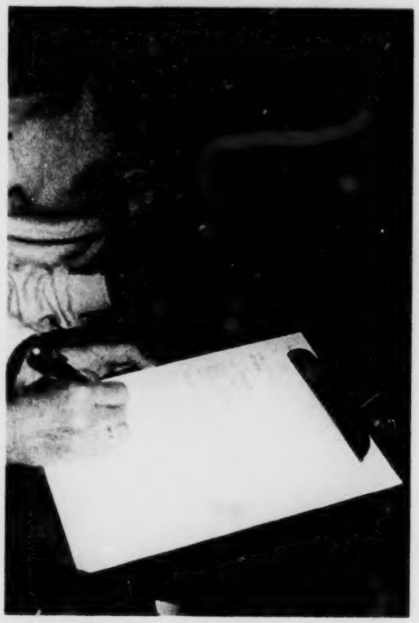
What do teachers observe?
Observation needs to reflect process and product as teachers watch children:
- Reading
- Writing
- Computing
- Problem-solving
- Singing
- Working
- Graphing
- Miming
- Constructing
- Talking
- Making maps
- Classifying
- Transitioning
- Caring for classroom, equipment or person property
- Listening
- Sorting
- Playing music
- Signing
- Dramatizing
- Socializing
- Dancing
- Playing
- Building
- Drawing
- Painting
- Keyboarding
- Interacting
- Responding to others

Where do teachers observe?
Teachers watch children in every setting they are in:
- Classrooms
- Field trips
- Lunch room
- Hallways
- Gym
- Playground
- Restrooms
- Media Centers/Libraries

What do teachers learn about a child from observing?

- Development in goal areas
- Attitudes
- Ability to work as an individual or in a group
- Initiative
- Desire to learn
- Likes and dislikes
- Level of understanding
- How materials are used
- Prior knowledge
- Learning styles
- Learning needs, abilities, and interests
- Problem solving strategies
- Organizational skills
- Need for assistance

Strategies for Observing



- Observe and record regularly and consistently as part of the classroom routine; make it an integral part of the daily work plan.
- Observe the class in a holistic way to obtain a general sense of what is occurring. There may be children who require your immediate attention. Note what the child was doing that attracted your attention; note also your interaction with the child and the response to that exchange.
- Plan for focused observations of specific children. Decide what you wish to observe and what information you need to make appropriate plans for the child. (See Widely-Held Expectations section.)
- Explain to the children the purpose of the observation.
- Choose a variety of settings to make observations. Vary the times and include independent and group situations throughout the day.
- Record the behavior of the child at the time the observation is made as much as possible.
- Watch, listen, and record in ways that do not interfere with the child's learning.
- Check to ensure recorded observations are being collected for each child in the class.
- Note as many observations as you can. When in doubt about your perceptions of a child's development, make and record more observations or enlist the support of a resource teacher, librarian, or principal.
- Plan time to share observations with the children and listen to their observations about themselves. This should help the child know individual strengths, see growth, and know where to focus future effort.
- Observations should reflect both process and product.

What questions do I ask myself when I observe children?

The following questions are designed to help you focus on the child's development toward the goals of the Primary Program. The questions will help you assess, evaluate, and report on each child's progress.

Aesthetic and Artistic Development

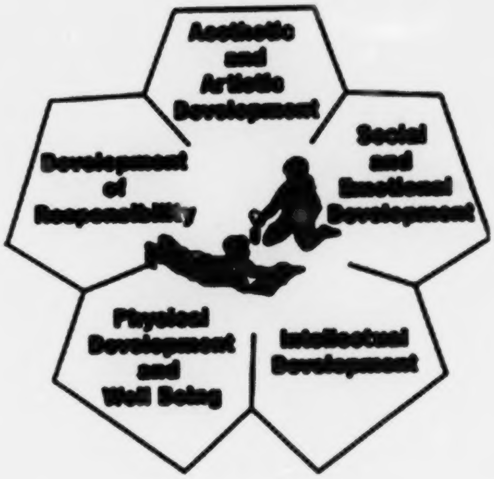
Does the child:

- Demonstrate an interest in and enthusiasm for art, drama, and music?
- Demonstrate a willingness to participate in a variety of sensory experiences?
- Demonstrate an ability to imagine and visualize?
- Use materials appropriately?
- Use a variety of materials/media to explore/learn/represent what is known?
- Respond to performances (drama, plays, dance, musical performance, other children's work)?
- Demonstrate confidence in and acceptance of his or her own creations?

Emotional and Social Development

Does the child:

- Cooperate and collaborate?
- Demonstrate play (independent, parallel, cooperative, or organized)?
- Express and receive empathy?
- Accept responsibility?
- Make alternate choices when necessary?
- Cope with change?
- Choose appropriate peer models?
- Consider the feelings of others and interact appropriately?
- Deal appropriately with the emotions of others?
- Take emotional risks?
- Act on impulse?
- Cry easily?
- Show anger, use physical force, give in?


Aesthetic and Artistic Development
Social and Emotional Development
Development of Responsibility
Physical Development and Well Being
Intellectual Development

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Intellectual Development

Does the child:

- Attend to the task at hand?
- Demonstrate curiosity and ask questions?
- Apply new information?
- Exhibit listening behaviors?
- Apply problem-solving strategies (define, gather, analyze, solve)?
- Use language to explore, learn, and represent knowledge and understanding?
- Use language to communicate effectively?
- Involve self in the processes of reading and writing?
- Represent knowledge in a variety of ways?
- Apply thinking skills, strategies, and processes?
- Demonstrate reflective thinking?
- Show joy in learning?

Physical Development and Well-Being

Does the child:

- Show interest in and participate in physical activity and movement?
- Show body and spatial awareness?
- Control physical movement (freely, hesitantly, awkwardly, age-appropriately)?
- Practice good nutritional habits?
- Demonstrate awareness of the importance of physical fitness?
- Work cooperatively and collaboratively in a physical activity setting?
- Handle toys, tools, implements, and equipment appropriately?
- Demonstrate an awareness of the need for safety in a variety of settings?
- Show care and respect for own and others' bodies?

Development of Responsibility

Does the child:

- Show sensitivity to other living things?
- Show a tolerance for differing opinions, feelings, and points of view?
- Accept differences in others (appearances, customs, and habits)?
- Appreciate cultural differences?
- Show pride in own heritage?
- Take appropriate action without adult reminders?
- Lead, cooperate, and follow as appropriate?
- Participate in decisions made by the group?
- Assume responsibility when given directions?
- Care for classroom equipment?
- Show flexibility when dealing with change?
- Appreciate and respect the environment?

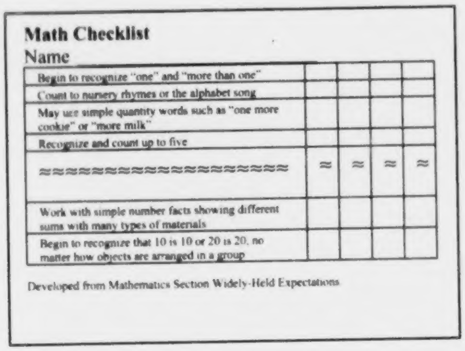
Ways to Record Observations

1. Checklists

Checklists are useful in planning, monitoring, and shaping learning in the classroom. They provide a quick and easy way for gathering information about children's learning. When using checklists they should:

- Focus on children
- Relate to program goals
- Require a yes or no response, not degrees of certainty
- Focus on one item or aspect at a time
- Not be used as reporting devices

Example:



Math Checklist

Name

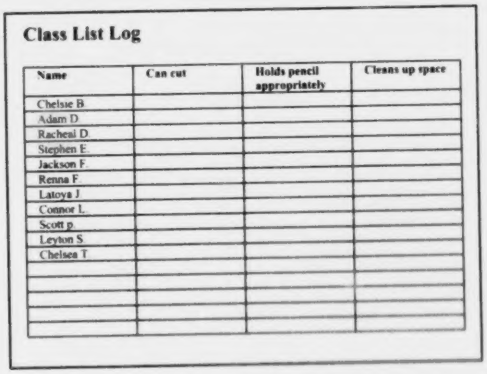
Begin to recognize "one" and "more than one"				
Count to nursery rhymes or the alphabet song				
May use simple quantity words such as "one more cookie" or "more milk"				
Recognize and count up to five				
≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈≈	≈	≈	≈	≈
Work with simple number facts showing different sums with many types of materials				
Begin to recognize that 10 is 10 or 20 is 20, no matter how objects are arranged in a group				

Developed from Mathematics Section Widely-Held Expectations

2. Class List Logs

Class list logs are used when the teacher wishes "to record one or more short, specific pieces of information about each child present that day" (Nilsen, 1997). Every child needs to be observed in one class session. This might be a yes/no observation (can cut, or listens to the story).

Example:



Class List Log

Name	Can cut	Holds pencil appropriately	Cleans up space
Chelsie B.			
Adam D.			
Racheal D.			
Stephen E.			
Jackson F.			
Renna F.			
Latoya J.			
Connor L.			
Scott p.			
Leyton S.			
Chelsea T.			

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3. **Anecdotal Records**

Anecdotal records contribute to overall assessment and evaluation when combined with other resources. They offer potentially the richest descriptions of children's behavior. They are a narrative account of many observations over a period of time and are a very factual recording method. Anecdotal records should be kept with these ideas in mind:

- Recount who, what, when and where—but not why.
- Write facts—what is actually observed with no interpretation.
- Record for all children.
- Record details in a specific or general area of a child's development.
- If quotes are used, quote the child exactly.

Possible ways of keeping anecdotal records include:

- Index cards in a file box
- Pages in a loose leaf binder indexed for each child
- At-a-glance sheets with one space for each child
- Post-it notes
- Address labels
- Computer software

(Nilsen, 1997)

Example:

Maddie was able to gallop
during music/movement
activity. 10/9/99

4. **Frequency Counts**

Frequency counts measure the repeated actions of a child, whole group, or teacher. Observations are tallied. Examples of use could be keeping track of numbers of sharing incidents in a day or numbers of teacher interventions needed in a particular time period. Frequency counts are often used by teachers in changing their own strategies of interaction with the children. (Nilsen, p. 96)

Example:

Frequency Count

Encouraging		
Group members	Frequency	Examples
Raphael	///	High-five signal; "Uh huh"
Mahmoud	/	"Good idea"
Alain		
Zito	////	"Yeah"; nods

Source: Adapted from Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1988). Cooperation in the classroom, Revised Edition in P. C. Abrami, B. Chambers, C. Poulsen, C. DeSimone, S. D'Apollonia, & J. Howden, (1995). *Classroom connections: Understanding and using cooperative learning.* Toronto: Harcourt Brace.

5. **Rating Scales**
Rating scales are useful for tracking a child's development. They are created according to predetermined criteria and can be subjective. They give a range of criteria from which to choose rather than just a yes or no. Rating scales are good for assessing reading-writing-language progress and are quick and easy. Progress can be easily shared with parents (Nilsen, 1997).

Example:

Rating Scale for Plan-Do-Review

Not Yet	*With Assistance*	*Independent*	
1	3	5	Child is able to make a plan.
1	3	5	Child is able to follow plan.
1	3	5	Child shares materials.
1	3	5	Child interacts cooperatively with peers.
1	3	5	Child demonstrates responsibility in use of materials.
1	3	5	Child is able to review activities.

6. **Time Samples**
Time samples are used to describe behavior sequences in detail as they occur within a given time period. They help teachers discover a pattern or frequency of behavior, track children's choices, playmates, and what they spend time doing. The information can be used to draw conclusions about a child's activity and write in the portfolio about observations.

7. **Media Records, Photographs, Audio Records, Video Records**
A media record is a hard copy of what is actually observed in the classroom or the product created. It can be used as part of the child's portfolio. It might include audio or video tape collection or products completed on the computer.

Collecting Authentic Evidence Through Children's Products

Portfolios

Collecting what children produce provides a major source of evidence on which teachers assess and evaluate learning. Each drawing, painting, construction, map, or piece of writing a child creates is a representation of that child's knowledge and understanding of the world. Looking at samples of children's products reveals patterns of growth and change over time. These samples, complemented by the teacher's notes on observations of the processes used and records of conversations and conferences, are effective in demonstrating and guiding student progress.

The portfolio is a collection, sampling, and interpretation of a child's products, observations, and other activities. A portfolio provides documentation of a child's growth and development. It shows what a child can do and provides a baseline from which teachers can plan new learning for that child, while evaluating the overall program and its effectiveness.

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Many kinds of data can be included in each child's portfolio. Inviting children to share in deciding what is included in the portfolio is important; *it helps children make increasingly critical choices about their work and helps them learn the process of self-evaluation.*

The portfolio is also a rich source of information for sharing with parents. At parent conferences, teachers can invite children to talk about their representations and products, showing their development. The portfolio illustrates specifically, concretely, and graphically all the things a child is doing in school. Parents get an overview of a child's learning, reinforcing learning as a collaborative process and reinforcing the idea of continuous learning, as a child's development is described and related to previous learning.

Portfolios help parents:
- Appreciate what their child can do and is attempting to do
- Look for growth over time
- Talk to the child and teacher about the collection
- Use the Widely-Held Expectations to help understand the child's progress

Steps in Setting up a Portfolio System

1. Read and become familiar with Widely-Held Expectations and state/district standards.
2. Decide how to collect the materials and label with children's names.
   - Boxes
   - Scrapbooks
   - Photo albums
   - Binders
   - Audio and video tapes
   - Computer disks
3. Determine what learning will be measured (language, math, science, social-emotional, physical, social studies, artistic-aesthetic).
4. Set up the organization system for documentation.
5. Decide on an observation plan—what, when, and how you will observe.
6. Consider how you will involve the child in assessment.

Collecting Children's Products

Hard copy examples:

Stories
Illustrations
Reading log
Writing a word problem
Lists
Reports
Story maps
Calculating
Collecting data
Charts
Models
Paintings
Posters
Photos of projects
Audio and video tapes of presentations
Poetry
Journal entries
Letters
Letter to author
Computer skills
Graphs
Displays
Research

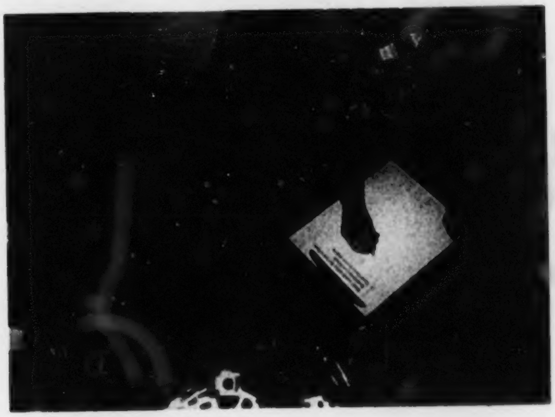
Rubrics

A rubric is a set of rules with specific scoring guidelines that describe qualitatively different levels of student performance and allow the assignment of ratings or scores.

In developing rubrics the following points should be considered:

1. Brainstorm words that describe the highest and lowest levels of student performance for the activity or project.
2. Select 2 to 3 key words (for each level) from the list generated in step one.
3. Describe intermediate levels of performance.
4. Look at actual samples of student performance and review/revise levels generated in steps one and two.
5. Ask another teacher to rate a sample of student performances using the rubric and look for areas of disagreement. Discuss disagreements.
6. Review and revise rubric based on discussion of disagreements.

See Assessment Appendix for sample rubrics.



Collecting Authentic Evidence through Conversations and Conferences

...with children

The social nature of learning is supported as teachers talk with children and plan activities where children talk with one another. Talking about what they have done and are attempting to do is necessary if children are to learn the skills of self-evaluation. The teacher's job is to respond and help others learn to respond constructively so ideas and projects can be shared with the goal of improving learning. It is through this process children learn to value what they do. The affirmation gained through such interaction helps develop the confidence essential for setting personal goals.

Children reveal what they think and know through their talk. Of course, a child's learning will precede his or her ability to talk about it; a child may know a concept but not be able to explain it or be proficient at doing something but not be able to talk about it.

> *Assessment and teaching should go hand-in-hand in the classroom, with each informing the other. Assessment for instruction therefore should be continuous. Furthermore, in order for assessment and teaching to work together, each should resemble the other. To know whether or not a young child learned from a particular classroom activity, teachers use an assessment procedure that resembles or is an integral part of the activity itself.*
>
> Teale, 1988

Nevertheless, conversation, dialogue, and conferences between teacher and child provide the teacher with a wealth of information about the child and his or her learning. This ongoing dialogue helps the teacher teach by helping the child clarify, extend, and enhance thinking and learning.

Talking and listening to children offer new insights into their learning. The best way to find out about a child's thinking is to ask the child. This talk is essential for parents and teachers as they plan for the individual needs of each child at home and at school.

When talking with and listening to children in school, teachers use the information to:

- Help clarify thinking
- Assist children in thinking about their own learning
- Help achieve new levels of understanding
- Facilitate self-evaluation
- Make children feel their ideas and opinions are valued
- Help children appreciate progress and set future goals
- Build positive teacher-child relationships
- Lead children to become self-directed learners
- Foster social development of interaction between peers and adults

Conversations with children need to be part of everyday activities in the home and classroom. Conversations enhance learning in two ways. They let the listener in on someone else's thinking and provide the opportunity to compare and confirm perceptions. As well, they allow the speaker to refine and clarify thinking by putting thoughts into words.

Conferences may take a variety of formats. Each has its particular uses and advantages. Examples include:

Interviews—Children reveal what they think and know through their talk. A child's learning will precede his or her ability to talk about it. Through dialogue the child clarifies, extends, and enhances thinking and learning, appreciating their progress and setting future goals as they work toward self-evaluation.

> *Individual, paired, and small group conferences* with the teacher helping to develop the concepts of cooperative and collaborative planning and learning.
>
> *Peer conferencing* where students work together on a task.
>
> *Negotiated Evaluation* which involves children, parents and all others concerned with the child's progress. The outcome of this type of conference is that everyone shares a collection of information. This increases the likelihood that more informed judgments and decisions will be made and put into action (Woodward, 1994).
>
> *Predictable conferencing* helps children to organize themselves and keep sight of their goals. As children anticipate their conference with the teacher, they begin to think more about their work and what they may say or do during the conference. This promotes self-assessment, which is meaningful and real to the child.
>
> *Roving Conferences* are those done while the teacher is walkng around observing the children and should be practiced in addition to predictable conferences. The teacher should be able to collaborate with any one student or group when the teachable moments arise (Graves, 1983).

Performance Tasks—They show the stages of thinking and are especially good for assessing math and science skills. The teacher presents tasks and observes how the child performs them. Performance tasks are done at selected times with selected children. The teacher will draw conclusions about the child's development and make curriculum decisions accordingly (Nilsen, 1997).

Examples of products for assessment through conversations and conferences include:
- Demonstrations
- Solving problems
- Storytelling
- Oral reading
- Counting
- One-to-one matching
- Descriptions
- Reading charts and graphs
- Making and describing models

You may find it useful to keep conference logs in which, following a conference, you record highlights, special notes, and reminders for the next conference (see the appendix in this section).

...with parents

Talking and listening to parents offers insights into their child's learning. Parents are familiar with their child's interests, dispositions, and special talents. Information may be collected from parents through:

- Informal conversations
- Formal conferences
- Interviews and surveys
- Parent observations of their child at home
- Parent selection of work samples from home which may become part of the child's portfolio.

Parents should be invited to become partners in their child's education. This means that teachers and parents do an equal share of listening and talking. Consider sending a survey home to the parents to gain information about the child and parental expectations and perceptions.

Dear Parents and Guardians,

We believe that parents should be partners in their child's education. Your perceptions are valuable and useful to us in planning the best learning program for your child. Please take a few minutes to answer the following questions.

What are your hopes for your child as he or she begins school? ____________________

Do you have any concerns abut your child's development? ____________________

What are your child's interests? How does he or she spend time at home? ____________________

What are your child's special talents? ____________________

What do you enjoy most about your child? ____________________

Are there behaviors which we can work on together? ____________________

In what ways can school personnel support your family (introducing new families, providing names for car pools, baby-sitting, contacting appropriate family service organizations)? ____________________

Thank you for your help in getting to know your child as a learner and as a member of our classroom.

Please return to:

Technology to Assist with Record-Keeping and Planning

The computer is an effective tool for planning assessment and evaluation and for record keeping at the primary level. Take care to select flexible and appropriate software. The ideal software can be used not only to store information but also to call up and review that information on the basis of the goals, and learning descriptors of the Primary Program. This makes it easier for teachers to track progress and to create summaries of learning for individual children and for the whole class. This, in turn, helps teachers to plan and report.

A good software program:

- Features easy ways to enter and view information from anywhere within the program
- Can record both demographic and learning development information for each student
- Can record and display anecdotal information
- Allows students to enter certain types of information on their own
- Automatically dates each entry
- Provides prompts for input about children who have not had comments recorded for a certain time period
- Contains appropriate security features

To allow the most effective use of information about children, software should be able to:

- Organize information in a variety of ways
- Help with reporting

Software that can reorganize student information in ways that are meaningful to you will provide a valuable saving of time. Software that stores great quantities of text but does not provide much organization tends to increase teacher time spent reading and rereading to find appropriate information.

Ideally, a system should be able to provide a concise, possibly visual or symbolic representation or summary of the information desired. From the summary, you should be able to refer back to the complete set of information.

Communicating Children's Progress

One of the fundamental purposes of assessment and evaluation is to provide meaningful information about the child. Families are traditionally the audience we envision when we talk about communication. The strategies teachers develop to enhance communication can be adapted to a broader spectrum to inform children, families, counselors, community health personnel, special area teachers, paraeducators, district personnel and community members.

Communication is a shared partnership between the teacher and family. The purpose of all communication with families is to be as informative as possible and to support a child's continued success in school. It is meaningful to report the child's progress in terms of actual classroom events and occurrences. When the teacher uses authentic examples of the child's activities in the classroom, the teacher demonstrates to the parents that he or she knows the child as well as the curriculum.

In dialoguing with families, as well as in writing progress report comments, the teacher describes the child's development as it relates to the goals of the primary program (aesthetic and artistic, emotional and social, physical, intellectual, and development of responsibility), state and district standards and benchmarks, and/or curriculum frameworks. Comments express what the child can do, the child's interest and attitudes, the child's learning needs, the teacher's plan to support the child, and how families can assist their child's learning.

The teacher facilitates and enhances communication with families by collaboratively developing goals and expectations at the start of the year. Throughout the year the child's progress is communicated both informally and formally.

Informal Methods
Dialogue
Newsletters
Anecdotal notes
Sending home samples of child's work
Sharing children's self-evaluations
Home visits by the teacher
Classroom visits by the parents
Video of classroom activities
Inviting families to learning celebrations
Electronic messages
Website for updates & homework information

Formal Methods
Progress reports
Conferences
Portfolios/Electronic portfolios
Systematic observation

The examples of communicating a child's progress in this section are suggestions. They are not meant to be prescriptive or limiting. Rather, they provide starting points or ideas for teachers to use, refine, or adapt. As teachers use opportunities to communicate information about children's progress, they will develop methods that best suit their own style and situation.

Written Progress Reports

One of the formal methods to report progress to parents is through a written progress report, often referred to as the report card. School districts typically adopt a consistent form, grading procedures, and style for writing these progress reports. Important areas to consider when developing a district progress report are:

- Do the areas being reported reflect the curriculum standards and benchmarks that are being taught and demonstrate the child's learning in the classroom rather than topics of study from purchased curriculum texts?
- Is the progress report inclusive of the whole child (all the goal areas of the Primary Program) rather than focused on academic areas only?
- Does the progress report support a child's ongoing development (emerging, consistent, independent) rather than comparing the child to other children in the class and using grading methods that are inappropriate (letter grades, percentages)?
- Does the progress report allow the teacher to describe the child's progress with support from actual classroom events and observations rather than report on what the child can't do?

Just as there are multiple ways to collect evidence of children's learning (documenting observational data, collecting products in a portfolio, and conferencing with a child about their thinking during an activity) there are also multiple formats that a progress report can include to communicate a child's learning to parents. Documentation may be summarized in a continuous progress map, through a rating scale or in a narrative format. No matter what format is chosen, the teacher will need to establish a process for preparing the progress report, the actual writing, and then reflecting on the report. Considerations related to this are summarized below.

Pre-writing
Prior to writing the report, think about the following:

- Review data collected that shows evidence of the child's learning (observational notes, products in the portfolio) and ensure that a variety of representations support all goal areas.
- After reviewing the evidence think about your key impressions on the child's progress in relation to the Widely-Held Expectations/district standards and benchmarks.
- Review goals set with the child the previous term, and talk with the child about his/her learning.
- Set up meeting times, if needed, with other school and district personnel to discuss relevant issues regarding individual children.

Writing the Report

Some things to keep in mind while writing the progress report are:

- Describe the child's progress in relation to state and district standards and benchmarks and use actual classroom learning experiences to clarify and illustrate what you mean.
- Look for patterns in the evidence you have collected to help you summarize the child's strengths and areas needing support.
- When indicating learning needs, state what strategies you plan to use to help the child. Offer suggestions for parents to use at home.
- Use language that parents can understand, and write comments that are informative and respectful of both the child and parent.
- Include samples of a child's self-evaluation.

Reflecting on the Written Report

After writing a report reflect on the content by asking the following questions:

- Does this report support the learner to improve?
- Is the tone positive?
- Does the report reflect the child's progress and capture his uniqueness?
- Does the report convey to the parents that I know their child as well as I know the curriculum.
- Does the report tell what the child can do, state the child's learning needs, and offer future plans to support the child's learning?

Reporting Progress to Parents
Questions to Ask

- What is the student able to do?
- What areas require further attention or development?
- In what ways can the child's learning be supported?
- How is the child progressing in relation to development expectations for children in a similar age range or in relation to grade level standards & benchmarks?

Examples of Progress Reports

Narrative Progress Report

The narrative progress report profiles the child's strength and learning needs in a descriptive format. It is a product of thoughtful reflection based on documentation of a child's learning from multiple sources over time.

Primary Report Card Sample

Stuart, age 7 year, 11 months, second formal report.

This report was sent home during the second formal reporting period following a student-led conference with parents. Stuart shared his portfolio, demonstrated his mathematical understanding, read a passage from a book, and presented a piece of his writing at the conference.

Summary of Report

This report:

- Describes growth in social development
- Comments on his gains in language arts, writing, and mathematics, as well as his participation in science and physical activities.
- Comments on the student's progress related to expectations for his age range.
- Identifies areas that need attention and will be supported.
- Identifies ways in which the parents can help.

What Stuart is able to do

Stuart

- Works well with others
- Is comfortable expressing his opinions, sharing ideas, and offering information during discussion times
- Listens carefully to his classmates
- Enjoys and participates in a wide variety of classroom activities

Stuart has made significant gains this term. Specifically, he

- Is using phonics, pictures, and context clues to read unknown words
- No longer needs to rely on books that have repetitious lines
- Reads more fluently and confidently
- Has improved in writing. He is now able to write longer and more interesting passages. Stuart is using phonetic spelling in his writing. His stories now have a beginning, a middle, and an end.
- Has very strong mathematical skills. Stuart can add and subtract rapidly to 20. He knows many number facts from memory. He can recognize patterns in numbers and is able to county by twos, fives, and tens accurately.
- Uses the science box equipment (see the attached curriculum letter) in many interesting ways. He especially likes to use the magnifying glass and thermometers during water experiments.
- Participates very well during our physical education classes, and has shown that he is able to catch and throw a ball well. Ask him to demonstrate these skills at home.

Areas that require further attention or development

As we discussed, he is not yet reading materials as independently as one would expect for children in his age range (7–9). In the next term, I will

- Continue to offer him learning assistance in reading
- Work on the correct formation of letters (he continues to reverse some letters). One of his goals for next term is to focus on the correct formation of the letters *b, p, s, q, d,* and *m* which he often writes as *w*.
- Stuart will be further challenged to work on adding and subtracting number facts to 50.

Ways to support Stuart at home

You might have him do activities at home that involve:

- Getting Stuart to select a passage or a book to read to you.
- Reading to him to support development in reading.
- Writing for a purpose (e.g., writing grocery lists, thank-you cards, birthday cards, reminders to anyone in the family).

From: Ministry of Education, Victoria, British Columbia.

Continuous Progress Maps/Developmental Continuum

A progress map or developmental continuum describes the nature of development in an area of learning and provides a frame of reference for monitoring individual growth. The intention is for the teacher to focus attention narrowly on one area of development and use the progress map for monitoring individual achievement through that area of learning. Additional maps can be used to look at a child's progress in other areas.

An essential component of a progress map or developmental continuum is that it describes developing competence in words and examples. The map tells the knowledge, skills and understandings of a learning area in the sequence in which they typically develop and provides examples of the kinds of performances and student work typically observed at particular levels of attainment.

Spelling and Writing Scale, Grades K–3

Early Emergent
Independence

Spelling and Writing Competencies			
Kindergarten	**First Grade**	**Second Grade**	**Third Grade**
☐ Represents spoken language with temporary and/or conventional spelling. ☐ Demonstrates understanding of literary language (e.g., "once upon a time," variety of sentence patterns). ☐ Writes most letters of the alphabet. ☐ Writes and/or participates in writing behaviors.	☐ Writes all upper and lower case letters of alphabet. ☐ Uses phonics knowledge and basic patterns (e.g., an, ee, ake) to spell correctly three- and four-letter words. ☐ Applies phonics to write independently, using temporary and/or conventional spelling. ☐ Uses basic punctuation and basic capitalization. ☐ Composes a variety of products (e.g., stories, journal entries, letters).	☐ Correctly spells, using previously studied words and spelling patterns in one's own writing. ☐ Represents with appropriate letters all the sounds of a word when writing. ☐ Begins to use formal language and/or literary language in place of oral language patterns, as appropriate. ☐ Plans and makes judgments about what to include in written products. ☐ With guided discussion, revises to clarify and refine writing. ☐ Given help with organization, writes structured, informative presentations and narratives. ☐ Attends to spelling, mechanics, and format for final products in one's own writing.	☐ Demonstrates and uses prewriting strategies (drawing, brainstorming, webbing, or story-boarding. ☐ Revises by adding and/or deleting for elaboration/clarification. ☐ Self-assesses own writing. ☐ Uses paragraphs to organize information. ☐ Uses concepts of order and time. ☐ Uses vocabulary, ideas, themes, and language structure from books in own writing. ☐ Writes a variety of literary, informational, and practical texts (fairy tale, poetry, recipes, news article, interviews). ☐ Writes to support ideas with reference to evidence presented in text. ☐ Demonstrates voice, sense of audience, purpose.

(North Carolina Department of Education, 1999)

Conferences

Throughout the school year there will be opportunities to hold conferences to discuss the child's progress. The purpose of such meetings is to exchange information in order to develop a better understanding of what the child can do, his or her learning needs, and plans for supporting the child.

Conferences have traditionally been held between the teacher and the parent(s); teachers, support staff and/or administrators have been included as necessary. Including the child in conferences helps to focus attention on the child in relation to the goals and the curriculum, rather than allowing curriculum issues to dominate. The following samples may be useful to teachers in planning for parent-teacher, and/or three-way (parent, student, teacher) or student-led conferences.

Parent-Teacher Conferences

Parent participation in conferences is enhanced when the initial communication is well-planned and carried out in a non-threatening manner. A successful conference includes: building rapport, obtaining information, providing information, and concluding strategies.

Building Rapport
- Welcome parents
- Establish a comfortable relationship
- Try to put everyone at ease
- Use reflection statements to encourage honest dialogue

Obtaining Information
- Ask parents to contribute information
- Use open-ended questions
- Listen, ask for clarification, pose questions
- Avoid negative, emotionally laden questions
- Avoid yes or no answers
- Obtain information before providing it
- If you take notes, let parents know you are taking notes so that you will be able to follow up on key points and offer them the opportunity to see the notes

Providing Information
- Offer suggestions for assisting the child with his or her learning
- Acknowledge parents' concerns and then respond to their statements
- Reassure parents that help is being provided if needed
- Collaborate to decide who will be responsible for what actions (what will the teacher do, what will the parent do, and what will the child do?)

Concluding Strategies
- Summarize major points
- Mention any unresolved issues needing further action and/or discussion

Parents are typically eager to gain information regarding their child's performance. Teachers should provide accurate and relevant information in a sensitive manner. The following are some recommendations for informing parents about children's school progress:

- Organize information into broad categories
- Begin with positive information
- Be careful not to overwhelm parents with too much detailed information
- Avoid using educational jargon
- Let the parent(s) know that you appreciate and value their child
- Cite specific examples about the child
- Encourage parents to discuss and clarify as needed
- Have available dated examples of the child's products
- If you don't know the answer to a question, say so
- End on a positive note, summarizing the plan you, the parent, and the child have agreed upon

Three-Way or Student-Led Conferences

(Child-Parent-Teacher)

Whenever possible students should be included in the process of evaluating and reporting their progress to the parents and teacher in three-way or student-led conference. In this conference, the student takes an active role preparing for leading and reflecting on the conference after it has taken place (Anthony, Johnson, Mickelson, & Preece, pg. 1989). Inform parents about this type of reporting approach early in the school year by scheduling a parent information session to explain the rationale and what is involved in student-led conferences.

In preparing for the conference, students spend time self-assessing their progress and setting goals for future learning. These lifelong learning skills are an important part of the student's education.

With young children, self-assessing and goal setting can be reinforced or guided by the teacher. The teacher may use guided reflection questions to assist students in focusing on certain aspects of their work samples. For example, a kindergarten or first grade teacher may ask the students to find samples of work that show change in their writing (Guskey, 1996).

During the conference, the child leads the dialogue and shares with the parents the progress he/she has demonstrated over the reporting period. The teacher's role is to be a support system for the child and to offer encouragement as appropriate. The teacher can focus upon progress the child has made in relation to the district or state standards and benchmarks instead of making comparisons to peers' accomplishments.

When the conference has finished, the child can ask the parents to write or comment on the information that was provided during the conference. Parents are invited to sign a classroom guest book before they leave. The purpose of the guest book is to provide the teacher with a record of parental attendance and feedback on the student-led reporting approach. At the end of the conference, parents can request a further conference with the teacher if they desire.

In the days following the conference, the students and teacher should hold conversations about their perceptions of the conference. This is an opportunity for the students and the teacher to reflect on the experience and identify any concerns. Student-led conferences give the student an active and meaningful part in assessing and reporting their own learning. This in turn leads to enhanced self-respect and self-esteem as they identify their strengths and the areas they are trying to improve upon with their parents. Additional before, during, and after conference activities may facilitate the teacher in making plans for the student-led conference. The suggestions that follow are possibilities.

Parent Follow-up to Three-Way Conference

1. Did you feel comfortable having your child involved in the conference? Yes No
2. Were all your concerns addressed? Yes No
3. If an action plan was developed, do you feel it was realistic? Yes No
4. Do you feel the time was well spent? Yes No
5. Did your child enjoy being part of the conference? Yes No
6. Any other comments? Yes No

Pre-Conference Activities

The Child

- Looks through his/her portfolio to see which products he/she wishes to share
- Decorates own portfolio
- Writes an invitation to parents
- Prepares a self-report (younger children can use drawing and phonetic spelling

The Whole Class

- Discuss preparation for parents' visits (classroom changes, bulletin boards)
- Discuss conference process
- Develop procedures for the conference process (taking coats, introducing parents)
- Role play the conference (rehearse with a peer or teacher)
- May prepare refreshments for parents

The Teacher

- Guides students in self-assessing their portfolio work samples using reflective questions
- Reviews each child's portfolio and progress relating to standards and benchmarks
- Schedules appointments with families
- Prepares a video or slide show about the classroom (for viewing while parents are waiting)

Three Way or Student-Led Conferences

During the Conference

The Child
- Greets and introduces parents and teachers
- Takes parents on tour of classroom
- Shows parents portfolio and products
- Discusses and sets learning goals

The Parents
- Participate in conference
- Acknowledge child's efforts and accomplishments
- Provide information

The Teacher
- Welcomes parents
- Encourages child to take leadership role
- Draws attention to signs of progress over time
- Points out the significance of the learning
- Facilitates setting of learning goals
- Acknowledges that education occurs at home
- Invites parents to interact throughout the year

After the Conference

The Child
- Fills out a conference evaluation
- Write parents a thank you note for attending conference

Whole Class
- Discusses conference process and make suggestions for another time

The Parents
- Fill out a conference evaluation
- Write a note or make comments to their child about the conference

The Teacher
- Records pertinent information
- Creates a new action plan
- Reads parents and child conference evaluations

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Assessment and Evaluation Appendix

Glossary

Rubrics

Sample Classroom Forms

Sample Parent Forms

Assessment Plans and Activities:
A Teacher's Self-Evaluation

Am I focusing on the learner and the learning (rather than on what has been learned)?

- Are my assessment practices helping me to be a "better" teacher—to work more effectively in enhancing student's development (rather than satisfying external, system-monitoring requirements)?
- Are my assessment activities meaningful to the students and contextualized within my classroom community (rather than trivial, artificial tasks)?
- Does what I am doing make sense to students, parents, and to me (rather than involving mysterious rituals and results that only experts can interpret)?
- Is assessment a dynamic, integral part of all classroom activities (rather than something that happens at the "end" when the learning is over)?
- Is assessment a shared collaborative activity in a community of discovery (rather than the sole right and responsibility of the teacher)?

From S. Jeroski, *Learner-focused Assessment: Helping Students Grow*, 1992.

Assessment Glossary

Alternative assessment—Any assessment other than traditional, selected-response (multiple-choice, true-false, and matching) tests. Includes performance assessment, personal communication, and assessment of dispositions such as students' attitudes toward learning and beliefs about themselves as learners.

Anecdotal records—A narrative account that records details in a specific or general area of a child's development through repeated observations over a period of time that recounts who, what, when, and where, *but not why*.

Assessment—The process of gathering information (both quantitative and qualitative) for systematic evaluation. In education, assessment covers a range of processes used to determine or estimate what students know and can do and how much they have learned. Assessment can include tests, student learning demonstrations, teacher observations, professional judgments, and other indicators such as graduation rates and surveys.

Authentic assessment—An assessment that engages students in applying knowledge and skills in ways that are used outside of the school setting. The student not only completes or demonstrates the desired behavior/skill/process, but does so within a real-life context. *This term is not synonymous with alternative assessment. An alternative assessment may or may not be authentic.*

Benchmark—Standards for judging performance or the characterization of developmental/educational milestones, such as what students should typically be able to do by the end of a certain grade.

Checklist—A scoring system that focuses on the presence or absence of a behavior or characteristic.

Criterion-referenced tests—Standardized tests that compare a student's performance to clearly identified learning tasks or skills levels. The basis for comparison is to a body of content knowledge and skills.

Developmental assessment—Measurement of a child's cognitive, knowledge, language, and psychomotor skills in order to evaluate development in comparison to children of the same chronological age.

Diagnostic assessment—An assessment that helps identify a child's strengths, weaknesses, successes, and needs so a teacher can make appropriate instructional decisions. Knowing and understanding where your children are coming from helps to plan where they are going.

Evaluation—The process of determining the merit, worth, or value of something, or the product of that process. Synonyms or partial-synonyms for this term include; appraise, analyze, critique, grade, judge, rate, rank or review.

Frequency counts—A tallied observation of the repeated actions of a child, whole group, or teacher.

Formal assessment—A systematic and structured means of collecting information on student performance that both teachers and students recognize as an assessment event.

High-stakes assessment—Assessments that carry serious consequences for students or for educators. The outcomes determine such important things as promotion to the next grade, graduation, merit pay for teachers, or school rankings reported in the newspaper.

Informal assessment—A means of collecting information about student performance in naturally occurring circumstances which may not produce highly accurate and systematic results but can provide useful insights about a child's learning.

Large-scale assessment—Standardized tests and other forms of assessment designed to be administered to large groups of individuals under prescribed conditions to provide information about performance on a standardized scale so that results for districts, states, or nations can be fairly compared.

Norms—Statistics or data that summarize the test performance of specified groups such as test-takers of various ages or grades.

Norm-referenced tests—Standardized tests that compare a student's performance to that of other test-takers. Norms are obtained by administering the test (under the same conditions) to a given sample (drawn from the population of interest, called the norm group) and then calculating means (or medians), standard deviations, percentile ranks, and other standard scores.

Observation—A systematic way to collect data by watching or listening to children during an activity.

Performance assessment—Assessment that encompasses many of the characteristics of both authentic and alternative assessment. These tasks ask students to performs, create, produce, or do something. These assessments may tap process, product or both.

Performance indicator—A comprehensive description of the overt behavior (observable performances) that indicate the presence of specific knowledge and/or skills. A performance indicators allows for assessment of attainment.

Portfolio—A way of collecting information for one or more of the following uses: (1) to showcase students work, (2) to describe student performance, or (3) to evaluate student performance. The term portfolio can refer to both the process associated with collecting information and the product itself, the collection. The key characteristics of effective portfolio systems are: (1) authenticity of instructional activities and assessments, (2) on-going assessment that is aligned with curriculum and instruction, (3) inclusion of assessments that focus on process as well as product, (4) assessment results used to document growth, (5) multidimensional, (6) collaboration between student and teacher, (7) parental involvement, and (8) student self-reflection and evaluation. A portfolio assessment is the process of evaluating student achievement based on portfolios.

Rating scale—A scoring system that identifies the frequency with which a behavior occurs (for example—always, usually, seldom).

Readiness test—A test used to evaluate a student's preparedness for a specific academic program. The test will identify current skill achievement and performance, not developmental potential.

Reliability—The degree to which a test or assessment measures consistently across different instances of measurement-for example, whether results are consistent across raters, times of measurement, or sets of test items.

Rubric—A set of specific scoring guidelines or rules that describe *qualitatively* different levels of student performance and allow the assignment of ratings or scores.

Scale—The demarcated continuum for judging performance. The range of numbers or levels within which we judge student work. Relative to rubrics, scale refers to the number of levels or performances that are defined.

Scoring—The purpose of scoring is to capture the essence of what a student knows or is able to do and to provide enough description to allow sound instructional decisions.

Screening—Selecting individuals on a preliminary test who are in need of more thorough evaluation.

Screening test—A test used as a first step in identifying children who may be in need of special services. If a potential problem is suggested by the results of a screening test, then a child should be referred for a more complete assessment and diagnosis.

Standard—The specific performance/product/achievement that sets the criteria for performance on the task in question.

Standard-led assessment (standards-based assessment)—Standard-led assessments are designed to measure clearly specified educational standards (student achievement targets) and therefore are closely linked to curriculum, relying upon a tight coupling between what is taught and what is tested.

Standardized tests—Tests that are administered and scored under conditions uniform to all students (test-takers). Standardization is a generic concept that can apply to any testing method-from multiple-choice to written essays to performance assessments. Standardization makes scores comparable and assures, to the extent possible, that test-takers have equal chances to demonstrate what they know.

Tasks/Items—These terms are generally used interchangeably. Traditionally, the term *items* has been used in conjunction with paper-and-pencil assessment, whereas the term *tasks* has been associated with performance assessment.

Test—A formal procedure for eliciting responses so as to measure the performance and capabilities of a student or group.

Validity—The accuracy of a test or assessment in measuring what it was intended to measure. Validity is determined by the extent to which interpretations and decisions based on test scores are warranted and supported by independent evidence.

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Rubrics

How to be a Jackpot Reader!!!

Name:______________________________

	Jackpot!!!	Almost to the Jackpot	Working to the Jackpot
Voice	▪ You read so everyone could hear. ▪ You read slowly so your audience could understand. ▪ You read with good expression and the audience enjoyed listening to you read.	▪ You had to be reminded to read louder and then you did. ▪ You had to be reminded to read more slowly and then you did. ▪ You are beginning to read with expression and need a little more practice.	▪ You read too quietly to be heard. You need to read louder. ▪ The audience could not understand your words because you read too fast. You need to read more slowly. ▪ You need more practice reading with expression.
Body	▪ You held the book away from your face. ▪ You showed the pictures slowly.	▪ There were a few times when you held the book too closely. You need to hold the book away from your face so your audience can hear you. ▪ You had to be reminded to show the pictures more slowly and then you did.	▪ You held the book too closely the whole time you were reading. You need to hold it away from your face so the audience can hear you. ▪ You didn't show the pictures or you need to remember to show the pictures more slowly.
Practice	▪ You knew all of the words or just got stuck on 1 or 2 words in the book. ▪ It sounded like you had practiced the book with an adult because you knew you to say the words and you knew what they meant. You read without starting and stopping.	▪ You got stuck on more than 2 words in the book and needed a little help. ▪ It sounded like you needed to practice with an adult because you didn't know how to say some of the words and/or you didn't know what they meant. You had to stop and start several times.	▪ You got stuck on lots of words in the book and needed a lot of help. The audience had a hard time staying interested. ▪ It sounded like you did not practice enough or not at all because you had to stop and start many times. The audience had a hard time staying interested. You need more practice.

Source: K. Routh, Norwalk Community School District, Norwalk, IA.

Writing...How Am I doing?

Name______________________________

Date______________________________ Title ______________________________

Ready to publish!!!!	Writing in progress!!	Oops!! Still need to...
I made a plan and am using it to help me with my new piece of writing.	I am making a plan for my new piece of writing.	I didn't make a plan/I lost my plan. I need to make a plan.
Each sentence is about the piece. My audience can understand my writing.	So far, each sentence is about the piece.	Some of my sentences don't have anything to do with the story. I need to change them.
I circled all of the words that I thought were not spelled correctly and I tried to look them up.	I have circled all of the words so far, that I think are not spelled correctly.	I need to go back and circle all of the words that I think are not spelled correctly.
I remembered to use capital letters: at the beginning of each sentence, for names of people, places, months, holidays and days of the week.	So far, I have remembered to use capital letters: at the beginning of each sentence, for names of people, places, months, holidays and days of the week.	I need to go back and put in some capital letters: at the beginning of sentences, names of people, places, months, holidays and days of the week.
I remembered to use small letters on all words that don't need a capital letter.	So far, I have remembered to use small letters on all words that don't need a capital letter.	I need to go back and check to see where I should use small letters instead of capital letters.
My audience can read my writing easily because I used good spacing and neat handwriting.	So far, my handwriting is easy to read because I used good spacing and neat handwriting.	I need to use neat handwriting and good spacing so my audience will be able to read it.
My sentences are easy to read because I remembered to put in periods, exclamation points or question marks to show where they end.	So far, my sentences are easy to read because I remembered to put in periods, exclamation points or question marks to show where they end.	My audience is having a hard time telling where my sentences begin and end. I need to put in periods, exclamation points or question marks where they belong.

Source: K. Routh, Norwalk Community School District, Norwalk, IA.

Writing... How Am I Doing?

Name______________________________

Date Started____________________ Title________________________________

Ready to Publish!!!	Still Working	Oops!! Still need to...	Comments:
I made a plan and I am using it to help me write my new piece.	I am still working on a plan for my new piece of writing.	I didn't make a plan/I lost my plan. I need to make a plan.	
Each sentence makes sense and is about my writing. My audience can understand what I have written.	So far each sentence makes sense and is about my writing. My audience can understand what I have written.	Some of what I have written doesn't make sense. I need to go back and make it better so my audience will understand what I have written.	
Mrs. Routh and I have talked about all of the things I needed to fix and I did.	Mrs. Routh and I have talked about the things I need to change and I need to go back and fix them.	Mrs. Routh and I have not talked about what needs to be fixed in my writing.	
My book has been typed and I have illustrated it.	My book has been typed and I am working on the illustrations.	I am waiting for Mrs. Routh to type my story.	

Source: K. Routh, Norwalk Community School District, Norwalk, IA.

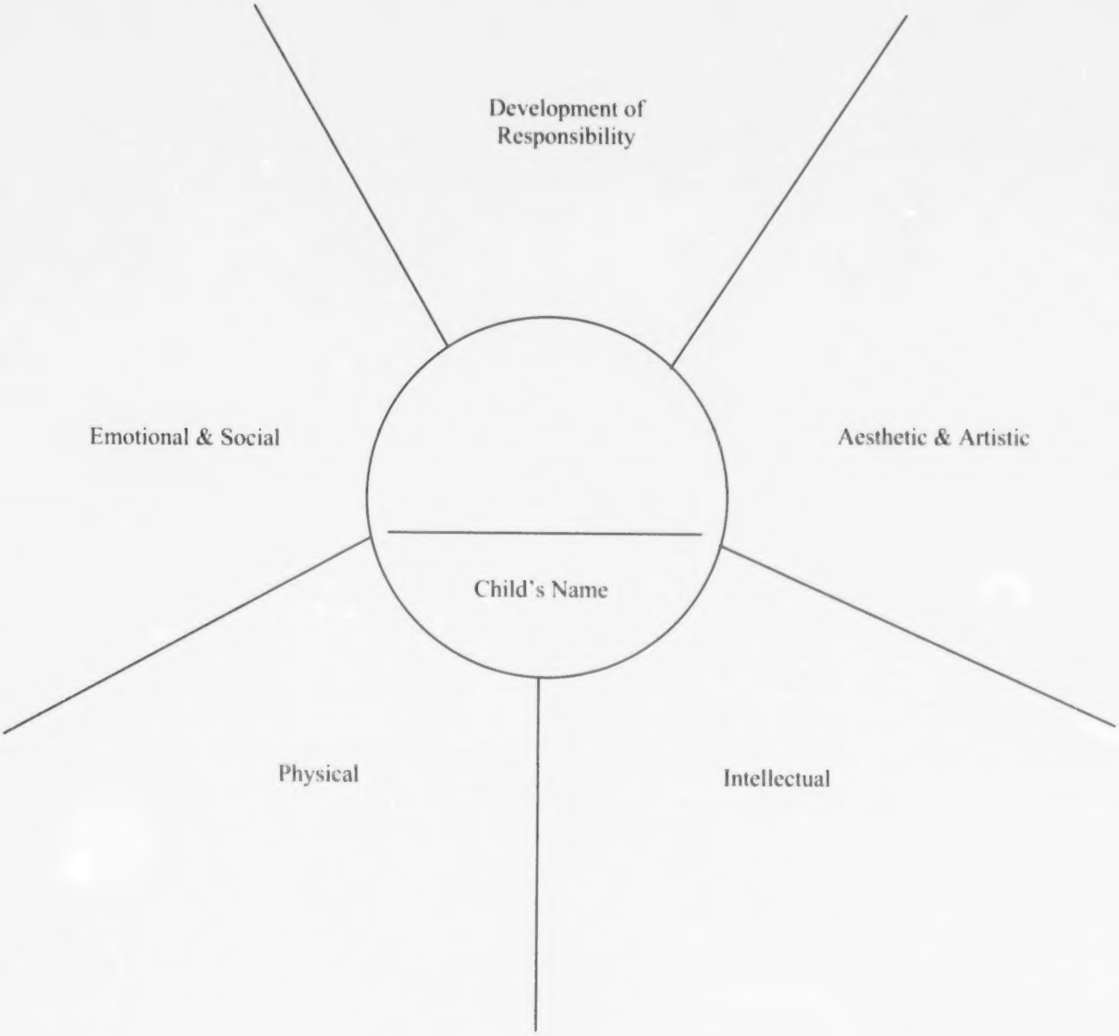
Rubrics for Projects—Explanation of how projects will be evaluated

	Limited	**Satisfactory**	**Commendable**
Writing	Less than 3 questions answered	Three-five questions answered—who, what, when, where, why, who, how	More than 5 questions answered WELL
	Squished, off lines, messy, missing capitals, missing punctuation	Neat, capitals, punctuation	Best writing, interesting, details, paragraphs, quotation marks
Product	Sloppy, few colors, scribbly, not big	Neat, colorful	Elaborate, details, creative
	Just a little information, drawn only	Good information, shows what you learned	More elaboration, more color, more information, more creativity
Presentation	Soft, fast, paper in front of face	Strong, good words, good speed	Heard easily, interesting voice, explain well
	Taking product away	Tell enough to be interesting	Main parts well organized

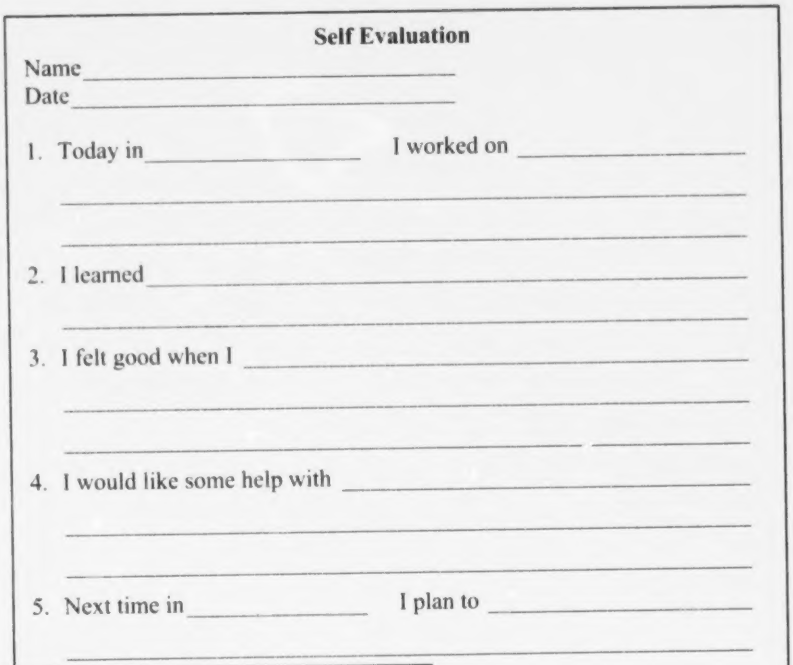
Source: Mrs. Barb Evans, Grade Two-Rousseau Elementary School, Lincoln, NE. January, 1995.

Sample forms

Notes on ________________________________ in All Goals


Development of Responsibility
Emotional & Social
Aesthetic & Artistic
Child's Name
Physical
Intellectual

Date: ____________________

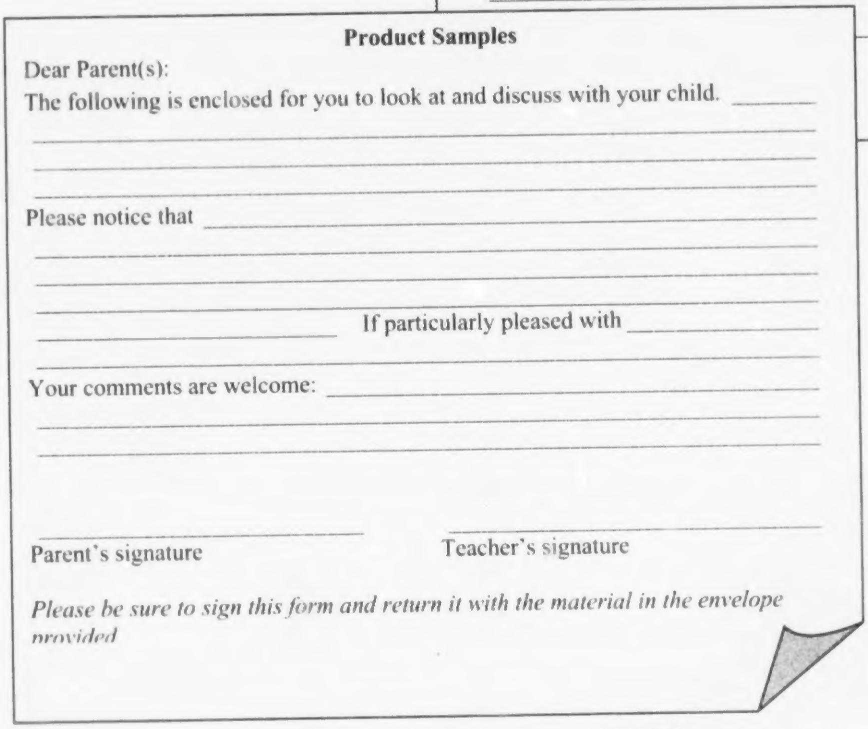


Self Evaluation

Name ____________________

Date ____________________

1. Today in ____________ I worked on ____________
2. I learned ____________
3. I felt good when I ____________
4. I would like some help with ____________
5. Next time in ____________ I plan to ____________



Product Samples

Dear Parent(s):

The following is enclosed for you to look at and discuss with your child. ____________

Please notice that ____________

____________ If particularly pleased with ____________

Your comments are welcome: ____________

____________ Parent's signature

____________ Teacher's signature

Please be sure to sign this form and return it with the material in the envelope provided

Parent Observation Guide

Dear Parent(s):

Welcome to our primary classroom. While you are visiting you might like to observe your child working with me, with other children, and on his or her own. You may wish to look for and make notes on some or all of the following points as you observe your child:

- Which activities did your child choose? ______________________________
- Does your child like to work by her/himself? ______________________________
- How long does your child stay with a particular activity? ______________________________
- Does your child listen to and follow directions? ______________________________
- How does your child try to join a group? ______________________________
- How does your child share and react with other children? ______________________________
- Does your child represent her/his ideas in different ways, e.g., writing, drawing, constructing? ______________________________
- Is your child able to organize and care for her/his things? ______________________________
- What changes have you noticed in your child since she/he started in our class? ______________________________
- What are some special things about your child you could tell me? (Jot down your thoughts and we can talk later.) ______________________________
- Now that you have observed in our classroom, what comments or questions do you have? (Jot down your thoughts and we can talk about them later.) ______________________________
- What did you learn or confirm about your child after observing today, e.g., I'm not the only persistent one in my family? ______________________________

Parent Observation Guide

What my child can do: ____________________

What I noticed about my child as she/he was working: ____________________

What I wondered about during my visit: ____________________

For example:

Write a list of facts about safety.

- He went up and down the rings in the gym.
- She concentrated on what she was doing.
- She took turns and showed someone else how to reach the rings.

Parent Observation Sheet

When I watched my child in the classroom, I expected to see ____________________

When I watched my child in the classroom, I was surprised to see ____________________

When I watched my child in the classroom, I was pleased to see ____________________

____
Child's Name

____
Parent's Signature

____
Date

Interview or Telephone Conversation Record

Student: ______________________ Date: ______________________

Informal Interview ☐ or Telephone Conversation ☐

Summary

Points Presented by Teacher	Comments by Parents
1. ______________________	______________________
______________________	______________________
______________________	______________________
2. ______________________	______________________
______________________	______________________
______________________	______________________
3. ______________________	______________________
______________________	______________________
______________________	______________________

Notes on any future action

1. ____

____

____

2. ____

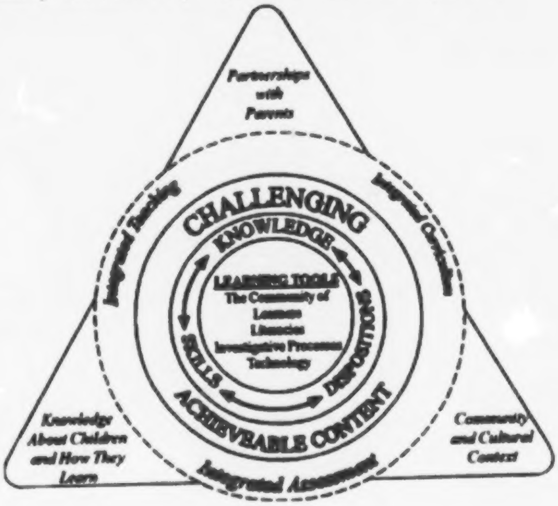
____

____

Integrated Curriculum in the Primary Program

Common Understandings

An integrated curriculum allows children to pursue learning in a holistic way, without the restrictions often imposed by subject boundaries. In early childhood programs it focuses upon the inter-relatedness of all curricular areas in helping children acquire basic learning tools. It recognizes that the curriculum for the primary grades includes reading, writing, listening, speaking, literature, drama, social studies, math, science, health, physical education, music, and visual arts. The curriculum also incorporates investigative processes and technology. It emphasizes the importance of maintaining partnerships with families; having knowledge of children and how they learn; and building upon the community and cultural context. Integrated teaching and learning processes enable children to acquire and use basic skills in all the content areas and to develop positive attitudes for continued successful learning throughout the elementary grades.


Partnerships with Parents
Integrated Teaching
Integrated Curriculum
CHALLENGING
KNOWLEDGE
LEARNING TOOLS
The Community of Learners
Literacies
Investigative Processes
Technology
SKILLS
DISPOSITIONS
ACHIEVEABLE CONTENT
Knowledge About Children and How They Learn
Community and Cultural Context
Integrated Assessment

Rationale for Integrating the Curriculum

Integration acknowledges and builds on the relationships which exist among all things. An integrated curriculum implies learning that is synthesized across traditional subject areas and learning experiences that are designed to be mutually reinforcing. This approach develops the child's ability to transfer their learning to other settings.

> *When we try to pick out anything by itself, we find it hitched to everything else in the universe.*
>
> Muir, 1911

Research also suggests that an integrated approach to learning is brain compatible. "The brain learns best in real-life, immersion-style multi-path learning…fragmented, piecemeal presenting can forever kill the joy and love of learning" (Jensen, 1996). The more connections made by the brain, the greater the opportunity for making high level inferences.

Integrating the curriculum is also reflective of developmentally appropriate practice. The curriculum is integrated so that children's learning occurs

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primarily through projects, themes, or topics that reflect children's interests and suggestions. Projects and themes are valuable instructional tools for accommodating all learners in the classroom. Skills are taught as needed to accomplish projects (Bredekamp, 1992).

Characteristics of an Integrated Curriculum

An integrated program includes:

- Experiences to develop children's attitudes, skills, and knowledge and to help them make connections across the curriculum
- Activities that provide for a range of abilities
- Activities that are both teacher-initiated and directed and child-initiated and directed
- Whole class, small group, and individual experiences
- Opportunities for critical and creative thinking
- Teacher, peer, and self-assessment
- Opportunities to experience learning as a meaningful whole

Getting Started

Learning through an integrated approach based on collaboration with children may be new to some children, parents, and teachers. A teacher can begin to use an integrated approach by working in cooperation with other teachers and with children in active learning situations such as:

- Activity-based mathematics
- Cooperative learning
- Readers' and writers' workshop
- Learning centers
- Multi-age grouping

By working in a collaborative manner, the teacher gains confidence and flexibility and realizes that children can take responsibility for their own learning. In turn, children gain the dispositions, skills, and knowledge they need to be successful lifelong learners.

It is important to help parents understand how an integrated approach is beneficial for their children. After hearing about or making a brief observation in a classroom where children are learning in an integrated manner, parents may misunderstand what is happening. Teachers can show parents that in an integrated classroom there is an underlying structure which combines an understanding of how children learn; familiarity with the district or state standards and benchmarks and goals and curriculum areas of the program; and knowledge of children in general, as well as specific knowledge of the children currently in the class. This structure provides a powerful base for facilitating learning.

Teachers can demonstrate the value of integration by:

- Holding informational meetings
- Providing copies of *The Primary Program* Active Learning Position statement and the Integrated Curriculum position statement.
- Providing materials to help interpret what is taking place in the classroom
- Helping children to reflect upon and articulate what they have learned

There are many possible routes on the journey leading to an integrated approach. There is no one "right way". The comfort level in starting, the length of the journey, and the rate of progress of teachers will vary. However, as the curriculum becomes less fragmented, the teacher sees new possibilities for integrated learning and teaching.

Planning for an Integrated Curriculum

The primary program advocates learning experiences which are relevant, purposeful, and worthwhile. If experiences are to engage children, they need to be shaped by children's interest and enthusiasm. This means choosing themes, topics, projects, or areas of study based on the knowledge children have and constructing a plan which is driven by the children's curiosity. This does not mean an undirected, ever-changing scavenger hunt in search of answers to the question of the day. The children's need for inquiry becomes the vehicle for the integration. The teacher's responsibility is to construct the plan which will provide the scope and depth necessary to ensure a valuable educational experience for all children. To provide direction and balance, a teacher needs to make long range or yearly plans which can be reviewed and adjusted throughout the year. A long-term plan should consider:

- The children's strengths and interests
- The teacher's strengths and interests
- State or district standards and benchmarks
- The goals of the primary program
- Assessment and evaluation
- School and community resources

> *The key to planning an integrated child-centered curriculum is balance—a balance among large group, small group and individual activities, a balance in curriculum and content areas, and a balance between teacher-directed and child-initiated experiences.*
>
> Schwartz & Pollishuke, 1991

Children's Strengths and Interests

Beginning the year with a unit, theme, or topic such as "Me" or "Getting to Know You" allows the teacher and children to learn about one another and discover shared interests. While the class is learning about one another, the teacher and children can agree upon the routines necessary to facilitate a harmonious classroom. Involving children in arranging and decorating the classroom, setting up storage systems, and suggesting topics builds the foundation for motivation and commitment to one another. Many teachers find a class brainstorming session to determine areas of interest is an essential first step in establishing a learner-focused curriculum. These suggestions may be listed, prioritized, displayed, and revisited during the year.

The key factor is inviting all class members, including the teacher, to provide suggestions and participate in developing a list of agreed-upon topics for study. This list becomes the starting place for the teacher in planning activities and experiences which provide a balance of content and process.

The Teacher's Strengths and Interests

Just as children's wonder and joy drives their learning, so can the teacher's interests and enthusiasm. Children need to see their teachers as learners and as human beings. The teacher's willingness to share what he or she values shows the children that learning is a lifelong activity and that their teacher is a person who thinks and feels and cares.

In long range planning, teachers need to ask: "How can I use my interests and talents to enhance learning and still incorporate the children's interests? What contributions can I make by sharing?" Such sharing may include:

- Personal culture
- Love of literature
- Experiences with writing
- Interest in sciences
- Recreational activities
- Interest and talent in fine arts
- An inquiring attitude

State or District Standards and Benchmarks

An integrated curriculum provides a framework through which state or district standards and benchmarks can be met. For this reason, the teacher has the standards and benchmarks firmly in mind when planning the learning experiences for the theme or project. Planning work should begin by stating the standards and benchmarks being addressed. The strength lies in the standards and benchmarks being met in a meaningful, real-world, applied way rather than in a contrived, artificial context. When learning is meaningful the learner is able to transfer the learning to new situation. The type of learning that occurs through integration also fosters the development of lifelong skills such as self-directedness, organization, problem solving, communication, and self-assessment.

Goals of the Primary Program

Planning for an integrated curriculum begins with a consideration of children's needs, interests, questions, prior knowledge, and experiences. The goals and the curriculum areas of the primary program, as well as state or district standards and benchmarks will guide the teacher's planning. The learning dimensions (dispositions, skills, and knowledge) in each curriculum area also need to be considered when designing projects, themes, or topics of study with the children. The teacher weaves knowledge of the curriculum and the interests of children into the fabric of the classroom curriculum.

It is important to note that not all goals or curriculum areas can be emphasized equally in every project, theme, or topic of study. However, the teacher ensures that a balance of experiences related to the goals and curriculum areas of the program is achieved over the course of the year. Throughout the year, at the conclusion of each project, theme, or topic, this balance is considered as part of ongoing evaluation and planning.

As the teacher plans appropriate learning experiences it becomes obvious that not all curriculum content can be explored in an integrated way. For example, the introduction of place value in mathematics need not be related to the project and might better be taught using concrete materials designed specifically for enhancing development of concepts in mathematics. Once understood, the concept of place value could subsequently be integrated into other activities and its connections in the real world highlighted.

To make the curriculum come alive for the children and the teacher, the project, theme, or topic of study must be something children see as purposeful and worthwhile. Their interest will then provide the motivation to inquire, to represent, and to reflect upon their learning. The need to communicate and share information creates the context through which meaning is constructed and skills and processes are developed and practiced

Assessment and Evaluation

In making a long-range plan for assessment and evaluation, the teacher needs to establish a system which facilitates:

- Each child's learning being considered on a regular basis
- Information being collected on all goal and curriculum areas
- Information being collected on state or district standards and benchmarks
- Information being recorded and stored
- Children being involved in the process
- Sharing and transferring information

A long-range plan for assessment and evaluation also needs to include ongoing questioning of how the information gained through interaction with children can be used to enhance, modify, and adapt further assessment, the curriculum, and the environment.

School and Community Resources

Human Resources

Who are the people who can support and enhance the learning experience?

- Children
- Parents
- Community
- Teacher-librarian
- Learning assistance teacher
- District personnel
- Specialist teachers

What cultures are represented in the community? What organizations could connect with our class, (multicultural societies, ethnic organizations, fine arts groups, service clubs, senior citizens, and elderly care facilities)?

Materials and Equipment

What materials are available?

- Classroom
- School
- District
- Child's home
- Community

An inventory of what is available may also form the basis for a wish list of materials and equipment necessary for organization or activities. Such lists are most successful when staff members collaborate to make the list of the items. In this way a plan can be developed to build upon available resources.

Physical Facilities

What space is available in the classroom, and what is its best use? Many teachers find that developing a partnership with another teacher to help one another with this task is a productive, timesaving endeavor. Children, too, have valuable insights into how space can be arranged. What areas are available in the school?

- Multi-purpose room
- Gymnasium
- Storage area

What community facilities are available for real world experiences?
- Parks and outdoor environments
- Businesses
- Museums and libraries
- Community services

What features of the natural environment could facilitate learning?
- Weather
- Geography
- Natural resources
- Historic sites

Ways to Integrate the Curriculum

Three ways to integrate the curriculum are:

- By using themes
- By using projects
- By using individual and small group studies

Themes

Theme Planning

One approach to integrating the curriculum is through theme studies. The definition of theme depends upon the model being used. It is not the purpose of this document to choose one model over another. Teachers may have received training in a particular model and become skilled in using it. In some cases, an entire staff may have adopted a model.

When the planning of the themes begins with children and involves them throughout the planning process, rich opportunities for learning are created. Integrated theme studies provide a common focus for the teacher and the children and create a sense of purpose and community within the classroom. Choosing the topics of study based on children's interests provides motivation and enthusiasm for learning.

By capitalizing on their interests, children's dispositions, skills, and knowledge are developed in relevant, meaningful ways. The need to know provides reasons for inquiry and communication; one class became advocates for bicycle safety following a serious accident in their community. This provided reasons for active learning in all curriculum areas.

Children involved in a theme or project need their teacher to help them reflect on their learning and lead them to make further connections between prior and new knowledge. Teachers can acknowledge children's increasing repertoire of skills and can demonstrate how these skills can be applied to other situations.

Teachers who are beginning to use themes may wish to use themes developed elsewhere. It is important to adapt such themes to meet the needs of each group of children. A rubric and several templates are provided further on in this chapter which may be used when designing and evaluating themes.

The following discussion of various types of theme studies may help teachers to understand the advantages and limitations of several methods of planning.

Types of Themes

Teacher Team and Class Initiated, Team Planned and Supported

This type of theme is developed by teachers who seek direction from the children and then collaborate to plan for the children's learning.

Advantages
- Working together, multiple resources, energy, and enthusiasm
- Teachers grow professionally in a collaborative approach
- Through their interactions with other adults, teachers get to know the children better
- Teachers gain skills and receive support which may enable them to take greater risks
- Children benefit from working with other children
- Children learn from the collaboration of others

Limitations
- Team work may seem to be too time consuming
- Asking for children's input requires teachers to relinquish some control

Child Initiated, Child and Teacher Planned and Supported

Topics for integrated class themes may develop from the interests of one or two children. Their enthusiasm may spread to all the children in the class. Based on the response, the teacher(s) plan(s) further. If the theme is broadly developed, there are usually enough choices to sustain the interests of all the children for an extended period.

Advantages
- Enthusiasm is high when children and teachers work together.
- Children learn skills and strategies and gain knowledge through the study of worthwhile topics.
- Children learn from the efforts of others and gain benefits from an in-depth study.
- Children begin to take some responsibility for their own learning.

Limitations
- Care must be taken to stimulate rather than overwhelm the children with teacher ideas.
- If used exclusively, this may not allow for individual differences.

Teacher Initiated, Planned, and Supported

This type of theme study is usually short in duration and specific in purpose. The theme suggestions may be used to teach other skills and strategies such as brainstorming, clustering, making lists, working cooperatively, recording, and ways of representing ideas which children need in order to embark on independent studies.

Advantages

- The teacher has a vehicle for extending children's capabilities.
- Children gain confidence in learning new skills.
- It may give teachers confidence in allowing children more opportunities to make decisions.

Limitations

- Teacher direction is high.
- Teacher planned themes used too frequently may discourage children's initiatives.
- Topics may be too narrow.
- Children have little choice.
- Children have fewer opportunities to be self-motivated.

Teacher Team Initiated and Planned, Whole Staff Supported

With this type of theme, the structure and the duration will vary according to the resources available. The topic and the activities are set.

Advantages

- Teachers work collaboratively.
- Teachers benefit from the interchange of ideas.
- Children learn from teachers' collaborative approach.
- The work may lead to more permanent ways of working; (team planning, sharing of resources, regrouping of children, more hands-on activity for children).
- Opportunities for parent and volunteer involvement lead to an understanding of approach.

Limitations

- Organizationally complex
- Short in duration
- Planned only occasionally
- Little student involvement in planning
- Rigid time periods for activities
- Activities may often allow for little creativity

Sample Theme

This sample theme is included to illustrate how a theme might develop. Keep in mind there is no one right way.

School Community

Each year children enter school excited about the beginning a new year. Whether the children come from a traditional, looped, or multi-age classroom or are just beginning their school experiences as kindergartners, building a classroom and school community is a goal of primary teachers.

This theme, school community can be adapted to fit the needs of the teacher and children at different grade levels and will accommodate children of different ability levels. Children have opportunities throughout the school community unit to collaborate with peers. Learning clubs, multiple intelligence centers, and partner experiences all lend themselves to student collaboration. Learning clubs can be formed based on interest, need, and ability.

Resources related to the topic are available everywhere in the classroom. Students can easily access the materials and use them throughout the day.

Considerations for developing the theme were as follows:

- Meaningfulness and relevancy to students' lives
- State and district standards, benchmarks and curriculum goals
- Age appropriateness
- Opportunities for real world experiences
- Background knowledge of the children
- Opportunities for connections throughout the year
- Opportunities for child-directed activities

Conceptual Key Points

Interdependence

In order for an organization to operate efficiently, there needs to be mutual dependence upon each other.

Diversity

Diversity is what makes each person special. As children discover how to accept and respect differences, they become stronger individuals.

Relationship

Relationships lead to valuable life-long experiences and may change and grow over time.

Significant Knowledge Key Points

Main ideas to be understood by children:

- Each child is unique and contributes in his/her own way to a classroom community.
- Children's cultural backgrounds are important to their unique character.
- A classroom community consists of people working together and respecting the needs of all members.
- People rely on each other and perform certain jobs.
- The environment affects how people live and work.

Skill Key Points

Examples of skills children are expected to develop:

- Reaches standards, benchmarks and curriculum goals
- Reads and responds to self-selected books
- Combines drawing and writing to compose thank you letters to school staff
- Speaks and listens in a community circle
- Is able to sequence events that occur in the school day
- Sorts, classifies and displays information using graphs. (Examples include eye colors of the children in the classroom, means of transportation getting to and from school, and the number of girls and boys in the class.)
- Counts the number of adults that work in the school

Resources

- Study trips, class speakers, literature, news media, materials, technology, the Internet
- Walking study trips in and around the school
- Visiting with school workers while touring the building
- A variety of pictures and storybooks that reflect diversity
- Dolls and puppets of both genders and of different cultures and races for children to use with role playing
- Guest speakers (principal, secretary, counselor, food servers, custodian)
- Books

Aliki	*We Are Best Friends*
Brown, Marc	*Pickle Things*
Chardiet, Bernice & Grace Maccarone	*The Best Teacher in the World*
Cohen, Miriam	*Jim Meets the Thing* or *Liar, Liar, Pants on Fire*
Cole, Joanna	*The Missing Tooth*
Heine, Helme	*Friends*
Heinst, Marie	*My First Number Book*
Houston, Gloria	*My Great-Aunt Arizona*
Keller, Holly	*The New Boy*
Lobel, Arnold	*Frog and Toad are Friends*
Micklethwait, Lucy	*I Spy Two Eyes: Numbers in Art*
Mills, Lauren	*The Rag Coat*
Pfister, Marcus	*The Rainbow Fish*
Schwartz, Amy	*Annabelle Swift, Kindergartner*
Thaler, Mike	*A Hippopotamus Ate the Teacher*
Viorst, Judith	*Rosie and Michael*
Zolotow, Char	*A New Friend*

Welcome Procedure (A daily activity to begin each day.)

- State an appreciation for a peer
- Invite someone to play with you at recess today
- Write or draw an act of kindness to a friend in the classroom.

"CUE" Connection (*creative, useful, emotional* hook to stimulate interest in the theme).

- KWL-What do children know about the topic?
- What do they want to learn about the topic?
- After the theme unit, what learning has occurred as a result of the study?
- Read *Chrysanthemum* by Kevin Henkes

Me in a Bag Activity

Dear Parents,

First grade students are doing an activity called "Me in a Bag", to help the members of our classrooms get to know each other and to establish a classroom community. This activity provides the opportunity for us all to learn things about the people we will be sharing our school with this year.

Please help your child choose 2 or 3 objects such as pictures, special treasures, or any meaningful items that let others know more about them. All objects must fit inside the brown bag provided.

We will share our bags on Thursday, August 28th and Friday, August 29th. We will be keeping our bags at school for several days, so do not send items that are needed at home.

Thank you for helping with this activity.

Sincerely,
First Grade Teachers

Community Circle (a whole class activity in which the goal is to build trust and relationships with the learners in the group).

- I am happy when…
- I showed caring when…
- Something I like to do at school is…
- "Me in a Bag"

Multiple Intelligence Activity Centers:

Word: Write and/or draw thank you letters or books to staff members.
Logic: Make friendship pudding or another snack (invite the cooks to help).
Self: Make a flip book showing people and the places they work at school.
Body: Videotape children acting out jobs people have at school.
Music: Sing and play the game "Do you know the job I do?
Sing and record on tape friendship songs such as "The More We Get Together."
Nature: Pick up trash in and around the school.
Picture: On overhead transparencies, children draw a favorite part of their school day.
People: Children participate in computer activities taking turns with software.

Do you know the job I do?

Make arrangements to take your class on a tour of the building to see school staff at work. If possible, schedule your tour so people know when you're coming and can talk briefly about their jobs and answer questions.

Following the tour, have the students sing the words below to the tune of "The Muffin Man." Divide them into small groups and give each group a person's job to pantomime. One group sings the first verse while pantomiming the job.

The rest of the class sings the second verse and then names the job and the person who does the job at school.

Do you know the job I do,
The job I do, the job I do?
Do you know the job I do,
To help you at this school?

Oh, yes, we know the job you do,
The job you do, the job you do.
Yes, we know the job you do,
To help us at this school.

Closure

- I'm going to name some of the jobs here at school. If you know the name of the person who does that job, raise your hand. (As you name each of the jobs, ask someone to name the person.)
- Think about why we need to get to know the adults who help us here at school. Be ready with a reason in case I call on you.
- Think of a reason why it's important to thank our classroom guest for coming. Tell your neighbor.

Lions-Quest: Skills for Growing

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Assessment Plans:

- Observe how children work and play cooperatively (learning clubs, playground)
- Work Sampling System checklist (personal and social development section)
- Anecdotal notes while children carry out multiple intelligence activities and at various times throughout the day when children are working
- Community circle observations
- Student interviews to reflect children's thought processes
- Student's self-assessments describing something they did well at the end of each school day. This can be shared in a variety of ways: with a peer, learning club, class, teacher or family members.

Work Sampling System

A	**Self concept**		**F**	**W**	**S**
1.	Shows comfort and confidence with self	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
2.	Shows initiative and self-direction in actions	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
B	**Self control**		**F**	**W**	**S**
1.	Shows comfort and confidence with self	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
2.	Shows initiative and self-direction in actions	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
3.	Manages transitions and adapts to changes in routing	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
C	**Approach to learning**		**F**	**W**	**S**
1.	Shows eagerness and curiosity as a learner	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
2.	Begins to make independent choices of materials, activities, and work/play partners	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
3.	Approaches tasks with flexibility and inventiveness	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
4.	Sustains attention to work over a period of time	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
D	**Interactions with others**		**F**	**W**	**S**
1.	Interacts easily with peers when playing or working cooperatively	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
2.	Interacts easily with adults	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
3.	Participates in the group life of the class	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
4.	Plays cooperatively in group games	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
5.	Shows empathy and caring for others	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
E	**Conflict resolution**		**F**	**W**	**S**
1.	Begins to use discussion and compromise to resolve conflicts	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐
2.	Seeks help when unable to resolve conflicts independently	Not Yet	☐	☐	☐
		In Process	☐	☐	☐
		Proficient	☐	☐	☐

Meisels, S. J., Jablon, J. R., Mardsen, D. B., Dichtelmiller, M. L., & Dorfman, A. B. (1994). *The Work Sampling System*. Ann Arbor, MI: Rebus, Inc

Tools for Planning and Evaluating Theme Work

The following pages contain a rubric, templates, and checklist to use when planning themes, evaluating an existing theme, or reflecting on completed theme work.

Teacher Checklist

Considerations When Choosing a Theme

1. The theme is developmentally appropriate.
2. The theme is broad enough to support state or district standards and benchmarks.
3. The theme connects many curriculum areas in a meaningful rather than contrived way.
4. The theme is free of or addresses gender, racial, cultural, or other biases.
5. The theme is engaging to teacher and students.
6. Quality resources are available to support the theme.
7. The theme promotes the use of multiple intelligences.
8. The theme reflects real world experiences.
9. The theme will culminate in a variety of demonstrations of learning.

Reflections After Theme is Completed

1. Was this theme developmentally appropriate?
2. Were state or district standards and benchmarks achieved?
3. Were there adequate resources to support learning?
4. Was the length of time devoted to the theme appropriate?
5. Did this theme meet the needs of diverse learners?
6. What would I keep the same?

Template 1

The Inquiry Cycle

Topic/Concept: ______________________________

Teacher Name(s) ______________________________

1. **Explore Topic:** "Mucking around"/outline the activities which enables children to explore the topic.

2. **Develop Focusing Question(s):** List the questions which were developed to focus the investigation.

3. **Collect Ideas:** List some of the resources you and the children used to gather information, (books, media, technology).

4. **Collaborate with Others:** Give one or two examples of ways in which children worked with others in and/or out of the classroom. If you used the Internet, please include a few good URLs.

5. **Share Ideas:** What activities/processes did the children use for sharing their work with others?

6. **Reflect on the Process:** What assessment methods did you and the children use?

7. **District Curriculum:** What standards and benchmarks from state or district curriculum were a part of the inquiry?

8. **Invitations for Further Inquiry:** What possibilities for further inquiry came up during this cycle?

Adapted by Johnston, Meehan & Shain from Harste, Burke and Short, 1991.

Template 2

Recording the Learning

Topic of Investigation ____

Teacher Name(s) ____

Resources—List some of the resources used. Please include multimedia and the Internet if applicable.

Central Concept—The overall learning goal(s) of the investigation.

Process/Skills Used—State or district curriculum standards & benchmarks, Language, Art, Math, Drama, Science…

Concept Web—List or web the sub concepts which are related to the overall learning goal.

Template 2 (continued)

Investigations—What were some of the investigative activities which engaged children in the unit? Activities should reflect the concepts and processes on page 1.

Explain, Clarify, and Share to Make Connections—Describe one or two ways children were given opportunities to explain, clarify their thinking, and share ideas in order to make connections.

Assessment—How did the children represent their learning? Assessment should reflect the learning goals listed at the beginning of this template.

Extensions—What are some further investigations you are considering and how will you help children apply what they have learned to another situation?

Template 3

What will we study?

What are the important concepts to be developed? (web of sub-topics and questions)

What are the resources we can use to answer our questions about this topic?

How will we find the resources?

How will we organize what we find out?

How will we show what we know? (Assessment and Evaluation)

Discussion of Theme Template 3

What will we study?
Brainstorm possible topics with the children the first day of school. Keep a running list for group or individual exploration.

What are the important concepts to be developed?
Create a web on chart paper with other teachers and with the children. Ask:

- What do we think we already know about this topic?
- What do we wonder about when we think about this topic?

Keep revising this list as learning occurs.

What are the resources we can use to answer our questions about this topic?
The children and teacher list (possibly on the topic web) all the available resources which would provide information. Resources include books, art collections, displays of real objects related to the topic, child created displays, experts outside and inside the classroom, technological resources, and places to visit. The list is limited only by the imagination.

How will we find and use the resources?
With the children, plan activities for locating, collecting, and finding the needed resources. Write letters to outside experts, make phone calls to parents (children can make phone calls, too); go to the library, make the arrangements for excursions, and do whatever it takes to support learning.

How will we organize what we find out from the available resources?
Develop some strategies to record what you learn: (videotape, write individual and class journals, logs, and other writings, construct, do artwork). Classroom activities center around the learning taking place.

How will we show what we know?
This is considered throughout the period of study. What are the learning goals and what will we design, construct, write, draw, tape, or develop to demonstrate our learning to a significant other? (See the *Assessment and Evaluation* section for ways to document learning.)

Theme Rubric

Curriculum Indicators

High Quality			*Poor Quality*
Identifies and supports district standards and benchmarks or curriculum goals	Supports district standards and benchmarks or curriculum goals	Little connection to standards and benchmarks or curriculum goals	No connection to district standards and benchmarks or curriculum goals
Connects many curriculum areas	Connects at least three areas of the curriculum	Connects two areas of the curriculum	Focus is only on one area of the curriculum
Promotes cultural diversity	Respects cultural diversity	Ignores cultural diversity	Shows disrespect for cultural diversity
Real world, worthwhile, and meaningful	Real world connection	Narrow focus rather than conceptual	Not worthwhile

Instructional Indicators

High Quality			*Poor Quality*
Accommodates each student's ability level	Provides for multiple ability levels	Age appropriate	Not age appropriate
Engages all learners, including teacher	Engages most learners	Engages only half of the learners	Not engaging
A variety of resources, including technology, easily accessed by students	Adequate resources, including technology, easily accessed by students	Limited resources, but easily accessed by students	Few resources, distributed only by teacher
Balances skill instruction with constructivism, investigation, inquiry, and problem solving	Balances skill instruction with at least two other types of learning	Mostly skill instruction	Skill instruction only
Balances child directed with teacher directed	Some direction comes from the child	Teacher directed	Student participation discouraged
Skillful ways of grouping	Flexible rather than fixed groups	Mostly ability level grouping	Ability level grouping only
Many opportunities for collaboration	Some opportunities for collaboration	Little opportunity for collaboration	Collaboration discouraged

Assessment Indicators

High Quality			*Poor Quality*
Teacher uses many ways of assessing process and outcomes of students in a natural context	Teacher uses at least two ways of assessing in a natural context	Assessment takes place in a natural context	Assessment is artificial and contrived
All students have an opportunity to demonstrate their learning in a variety of ways, including use of technology, to others, including parents	All students demonstrate their learning to at least one person, other than the teacher	A few of the students demonstrate their learning to others	Learning is only demonstrated to the teacher
All students self-assess	Opportunity for self-assessment	Little opportunity for self-assessment	No self-assessment

Project Work

Project Planning

Projects as part of the Primary Program are highly recommended as a way to make sense of information in children's lives. Projects involve the investigation of a topic but differ from *traditional* thematic units because they are fully integrated. In project planning the disciplines are naturally combined; there is no need to provide distinctions or to weigh the number of activities in each discipline. The goal is to learn about something, using all the available resources and incorporating the skills, knowledge, and dispositions needed to accomplish that goal.

The project approach is firmly grounded in the principles and ideology of the Primary Program, and should be part of a balanced curriculum. The skills, knowledge, and dispositions acquired by formal instruction are better learned and remembered when applied in a real context. Using projects with children is an opportunity for application and consolidation of the learning we value (Katz & Chard, 1989).

Aaron Theisen

The types of activities involved in a project reflect the principles of active learning:

- Children choose from available activities, materials, and experiences for a substantial portion of the day
- Experiences are meaningful and learner-centered
- Children have opportunities to ask questions, solve problems, and think independently
- There is a range of expectations for all children
- Children have opportunities to make decisions and to be creative
- Learners are respected and trusted
- Adults learn along with children
- Mistakes present opportunities to learn
- Content areas are integrated
- Assessment is a part of the daily routine

Children are decision-makers and planners throughout the process. The teacher leads and structures the project based on the children's ideas and contributions. "The project approach provides a context in which all aspects of children's minds can be engaged, challenged, and enriched" (Katz & Chard, 1989).

A Sample Project

The description that follows was developed and implemented in a kindergarten classroom. *It is intended as a model to be adapted to the individual interests of the children in other classrooms at other levels.* The topic for the project is a decision made by students and teachers together, and is *always* connected to the children, their families, and communities.

A Classroom Grocery Store *(narrative in the teacher's voice)*
Background
The idea for developing a classroom grocery store grew out of our investigation of places in our community. Our small town setting enabled us to take mini-fieldtrips to many of the local stores, observing the interdependent roles of community members and the effects on our lives. We discussed the possibility of converting some of the centers in our classroom into the places we'd learned about. We chose the grocery store as a place to start. At that point we revisited the town store with a list of specific questions in mind for setting up our model. An example of the time line, sample activities, and assessments follow. **As one assessment, all activities were recorded in a classroom journal at the end of each session.**

Project planning

Day 1. Mind webbing—"Tell me everything you already know about grocery stores," and "What do we wonder about setting up our own store?" were mapped in a project web and served as our guide for planning and developing. It also served as an ongoing record of our learning. We decided to visit the town grocery store again with our questions in hand.

Day 2. We returned to the town store to observe the things we were wondering about. "How is the food organized? What jobs do people do in the store? What signs or labels might we need to make? What items do we need to collect for our store?"

Upon return to our classroom, we brainstormed a list of items we'd like to collect for our classroom store. This became a note to send home request help from parents in finding some of the things on the list. We designated a collection site which was the dramatic play area. It was agreed that it would be closed until the collection was finished. We decided to put away a number of items in that area so that there would be room for the store.

Project in progress

Day 3-5. Collection days—We revisited the initial brainstorming activity (Day 1) and revised "what we know." (This is an ongoing activity. Revision should occur every 2–3 days). We reviewed items daily that were coming in. We talked about how we might use them and checked them against our wish list.

Day 6. Committee assignments. The question was posed, "What jobs need to be done in order to set up our store?" We decided upon these committees: shelf building, sign making, grocery sorting, grocery stacking, money and coupon sorting, grocery labeling, and furniture moving. (This committee drew a floor plan for the store which was approved by the rest of the group.) Responsibilities for each committee were outlined. (This later was included in the children's portfolios indicating their role on the committee.) We gathered the materials we would need for each committee.

Day 7. Committee work began. This was videotaped and reviewed in terms of the designated responsibilities. The grocery sorting group had to decide who would be responsible for each category (decided earlier). When they watched the video they could check to see if they were doing their job. (This assessment related to our overall curricular goal of making a positive contribution to the group.) This could have also been used as an assessment in classification, depending on your goal.

Project consolidation

Day 8. Finished committee work. Each group reported to the others, showing us their work and providing explanations for why they did something a certain way. For example, the shelf builders had to use metal fasteners instead of staples because of the thickness of the boxes; the sign makers read each sign and told us the purpose of putting the sign in a particular place.

Day 9. Read class journal for developing our grocery store. We set a date for the official opening and made a poster announcing it to the rest of the school. We scheduled times for each child to have a turn in the store. We talked about certain items which would be popular (such as the cash register) and brainstormed ways to share so everyone would get a turn.

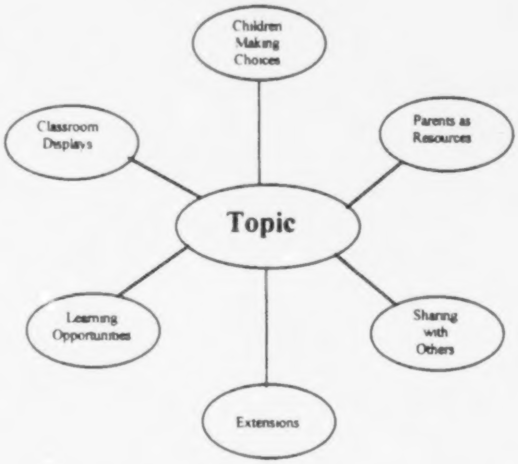
Day 10. Grand opening. We watched our video and celebrated with snacks (made in the deli, of course). Individual conferences regarding responsibility and cooperation followed in the next two weeks.

Examples of Each Feature in the Grocery Store Project

Parents as a Resource

Parents were essential to the collection of materials. They helped their child collect and bring grocery items and other materials on the list generated by the class.

Project Planning Web



Classroom Displays

- Our mind web was displayed and revised as a record of our learning.
- Our daily journal was available in the reading corner.
- Various representations (drawings, written committee plans, paintings) were displayed in the room.

Children Making Choices

The children made decisions about:

- Doing the project
- What materials we would need
- What we wanted to find out
- How to design the store
- On which committee they would serve and what role they would play
- How shelves would be built, groceries labeled and sorted, and the room arranged

Learning Opportunities

- The children acquired knowledge as they answered their "I wonder" questions.
- The children acquired skills through their committee work, planning, designing, sorting, cooperating, communicating, and problem-solving.
- The children strengthened the dispositions of effort and perseverance as they followed through on the project.

Extensions

- The quality of the model (the grocery store) was dependent upon the amount of investigating.
- The children continued to make changes and improvements as they worked with the model. The connection between the model and the real thing became increasingly significant.

Sharing with Others

- An invitation was extended to others in the school.
- Parents stopped to visit the store and learn about their child's contributions to the project.
- The conference served as a permanent record to share with the child and parents.

Tools for Evaluating Project Work

Following are several tools for evaluating project work. The first tool is for the teacher to use in evaluating the project and how it went. The second tool is an example of a form for the teacher and child to fill out together after the project has been completed. It is an example of what was used for the grocery store sample project. The third form is an example of a child's self-assessment. The last form is an example of the teacher's record of the child's project work.

Criteria for Evaluating Project Work

Topic:

- ✓ How appropriate is the project for children?
- ✓ Does it focus on real phenomena?
- ✓ Is it part of the children's experience?

Phase I:

- ✓ Web developed with the children; shows children's interests, questions, sub-topics
- ✓ Teacher and children both used field notes
- ✓ Preliminary drawings, paintings, stories, structures
- ✓ Children's plans, interview schedule

Phase II:

- ✓ Children's interview questions and answers
- ✓ Drawings, paintings, models, recordings of findings
- ✓ Resources used: objects, exhibits, visits from experts, excursions, readings
- ✓ Experiments, graphs, descriptive accounts

Phase III:

- ✓ Display of children's work; culminating event

Teacher's own evaluation:

- ✓ What did the children learn
  - Knowledge, skills, dispositions and feelings
- ✓ What opportunities did the children have to:
  - Investigate, find things out, interview, speculate, discuss, hypothesize, estimate, experiment, problem solve, evaluate?
- ✓ What role did the children take in making their own decisions for the direction the project would take?
- ✓ How did the project relate to other aspects of the curriculum?
- ✓ How would you do it differently if you were to do it again?
- ✓ Was this worthwhile?

Adapted from: L. Katz & S. Chard. (1989) *Engaging children's minds: The project approach*. Norwood, NJ. Ablex Publishing Corporation.

Child ______________________________ Teacher ___________________________

Related Goal: The child will make a positive contribution to the group.

Description of Activity: The teacher and child filled out this form during a conference. The child participated as a committee member for a class project and viewed a videotape of his or her committee at work. The criteria for a responsible committee member were developed by the class prior to the project and are used as a reference for the assessment. The section "I would like to work on" is used as a guide for subsequent conferences.

I did these things well:

I would like to work on:

☐ Comments were assisted by teacher
☐ Comments were unassisted

Responsible committee members (children and teacher develop this list together)

- Take turns
- Have jobs
- Use words to tell others what they need
- Put things where they belong at cleanup time
- Respect others' work
- Tell about their ideas
- Listen to others tell about their ideas
- Help others when asked
- Ask for help when needed
- Use inside voices
- Stays in their own work area

Note: Assessments for this activity focused on goals for responsibility and cooperation. Other focus goals might have included the areas of problem-solving, communication, and ability to plan and complete a task. It is essential that the focus for assessment and the means used to document the behaviors are developed with the activities. This page is an example of a documentation form for the grocery store project.

Child Self-assessment

Research Project—Other Project Date ____________

Topic or Project ____

Research Project Question ______________________________________

Did I answer my question?
Did I solve my problem?
🙂 🙁

Did I work well with my partner/team/by myself?

😀 🙂 😐 🙁

What kind of job did I do on my project?

😀 🙂 😐 🙁

If I could change one thing about my project, I would change ____________________
____

In my project I did

Reading ____________________
Writing ____________________
Listening ____________________
Adding ____________________
Speaking ____________________
Working with numbers __________
Measuring ____________________
Problem solving ______________

Student Comments ______________________________________

Teacher Comments ______________________________________

Signatures

______________________________ ______________________________

Project Information Sheet

Child's Name ______________________ Date ____________

Working Situation ____ Individual ____ Pair ___ Team

Project Description ______________________

Origination of Idea ______________________

Some specific Dimensions, Concepts, and Skills that may have been addressed through this project. (This is just a sampling. It is not meant to cover every dimension, concept or skill.)

Communication

____ Letter Recognition
____ Speaking
____ Writing
____ Letter/Sound Relationship
____ Listening
____ Other

Information Processing

Found information on his/her own that pertained to project.

Logical and Analytical Thinking (computation)

____ Counting
____ Adding
____ Measurement
____ Classification
____ Problem Solving
____ Number Recognition/Writing
____ Subtracting
____ Conservation of amount
____ Sequencing/Ordering

Productive Work Ethic

____ Worded well by his/her self
____ Was persistent in finishing
____ Worked well with others
____ Produced quality work

Other

Individual and Small Group Studies

Another way in which teachers plan for integrated curriculum, teaching, and learning is by allowing for independent and small group study based on a child's (or small group's) interest and curiosity about the world. The aim is to help children become independent learners. Topics may be initiated spontaneously by the child or a small group of children. The teacher offers resources and teaches the skills and strategies needed individually or through class instruction.

Advantages	**Limitations**
▪ Learning is more natural, rather than contrived or forced ▪ The child may be able to follow through independently ▪ Individual needs are more likely to be met ▪ This approach gives the child real reasons to read, write, and compute ▪ Children inspire other children	▪ Some children need considerable time playing, watching, listening, and observing before they participate at this level ▪ Access to the library is essential ▪ Teachers may feel uncomfortable with some of the ambiguity that comes with the facilitative role

Within the context of the classroom, the teacher responds to an individual child's interest while the class is engaged in other self directed learning. It takes a particular attitude, considerable practice and a store of resources to work effectively this way.

- The teacher is a learner *with* the child, rather than the expert.
- The teacher supports rather than interferes with the child's work.
- The teacher is sensitive to the degree and direction of the child's interest, taking care not to overwhelm the child with suggestions and ideas.
- The teacher lets the study develop naturally, aware of the standards and benchmarks addressed, for example, reading comprehension, appropriate use of technology, communicating content learned.
- The teacher realizes that the process of learning is as important as the content. The child is learning to be a learner.

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An example of such a study (Ants) can be found in the section, "Technology in the Primary Curriculum." At the conclusion of the study, it is important for the child to have an opportunity to share the study with others, (a teacher, classmate, administrator, another class). Ways of communicating what has been learned may include:

- A *HyperStudio* presentation
- An oral report illustrated with drawings, charts, and models
- Reading a book the child wrote or dictated and illustrated

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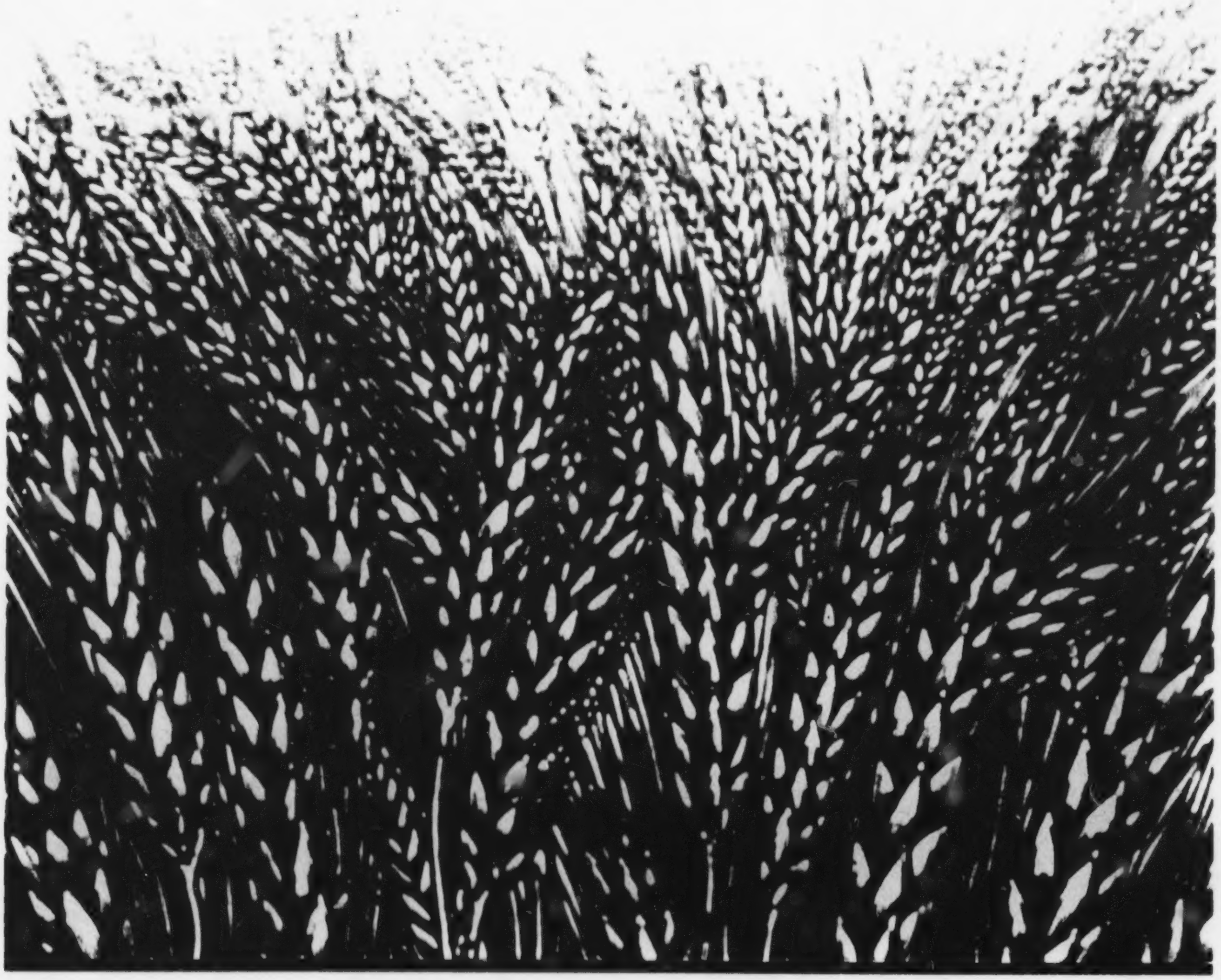

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celebrate learning and find wonder
every day in their lives.

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